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M. I.

MAN IN INDIA.

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January—March, 1939.

No 1.

I. An Enquiry into Correlations between Stature and Armlength, Stature and Handlength, Stature and Handbreadth, Stature and Hand-index, Arm-length and Hand-index, also Somatic Differences between different social and occupational groups of the people of Bengal.

By

BHUPENDRANATH DATTA, A.M., DR. PHIL., (*Hamburg*).

In this paper an attempt is being made to find out correlations between stature and Arm-length, Stature and Hand-length, Stature and Hand-breadth, Stature and Hand-index, Arm-length and Hand-length, Arm-length and Hand-index of the people of Bengal. Also the average of the middle-finger length of the same people is enquired into. For this purpose, 190 subjects from the population of Bengal are chosen. The subjects have been measured by me; and the following data on Stature, Arm-length, Hand-length, Hand-breadth, Hand-index, Middle-finger length are taken from the same collection of measurements. Martin's system of measurements is followed in taking somatological measurements.

The subjects under consideration here are the inhabitants of Bengal and all of them are Bengalee-speaking peoples. Only the Santal subjects dealt

Age No.

Sex

Class No.

Book No.

with in this paper who are inhabitants of Bankura District are bilinguals; also the Garo subject of this paper who has got a good Hindu name is possibly a bilingual. As regards religion, the subjects are divided into Hindu, Moslem and tribal religions. Besides these, as far as possible, the sept or caste division of each subject is noted down here. The Brahman subjects of this paper are divided into: Rāhṛī, Varendra, Sakad-wipī, Acharya, Gujār Gaur, Gaur, Utkal, Vaidik; the Kayasthas into Dakshin-Rāhṛī, Bangaj, Varendra and others; the Bagdi into Tentulē and others; the Tili into Bisgharia and Varendra; the Bauri into Mana, Dhula and Shikharia; the Moslems into Sheikh and Syed. Again ~~some~~ of the castes which are changing their names are noted with their new names ■ the Muchi is taking the name of Rishi, and the Koch, who long ago took the name of Rajbans'ī, is now-a-days calling himself a Kshatriya.

As regards the social groups dealt with here, their names are as follows:—

| | | |
|------------------|---------------|-----------------|
| (1) Brahman | (10) Tili | (19) Namas'ūdra |
| (2) Chatri | (11) Vaidya | (20) Rajak |
| (3) Gandabanik | (12) Tantubai | (21) Rajbans'ī |
| (4) Subarnabanik | (13) Bāgdi | (22) Sutradhar |
| (5) Kayastha | (14) Bedia | (23) Suṛṛī |
| (6) Mahishya | (15) Bhuiya | (24) Bauri |
| (7) Modak | (16) Dom | (25) Santal |
| (8) Nāpit | (17) Hajang | (26) Garo |
| (9) Sadgop | (18) Kalu | (27) Moslem |

| | | |
|------------|-------------|-------------|
| (28) Moyra | (30) Khaira | (32) Korā |
| (29) Tamli | (31) Muchi | (33) Bhumij |

Thus the representatives of 33 social groups are dealt with in this paper. Hence, the subjects are good samples of the people of Bengal. Besides these, for the sake of comparison, the subjects here are classed into "Caste Hindus," "Depressed Castes," "Aboriginals" and the "Moslems." In this paper, the "Caste Hindu" is the term used as it is used in the Census of 1931 (Vol. I Bengal and Sikkim, Pp. 497-501) for the clean higher castes, and the "Depressed castes" for all those who are scheduled in the lists of the "Untouchables" and "Depressed classes"; and those who are regarded in the Hindu society as *Anachorania* i.e. from whose hands the high caste Hindus will not drink a glass of water. In this matter, the Indian Census Report of 1931 has defined the terms as follows:—"The meaning of the term 'Depressed classes'—is used to describe those members of the community who in common social estimation are considered to be inferior, degraded, out-caste or not fit in any way for social and religious intercourse on reasonably equal terms with members of clean or higher caste" (P. 494).

As regards the "aboriginals" those castes which are enumerated in the Census Report as of "aboriginal derivation" (pp. 499) are noted here as such: viz, Santal, Korā, Bhumij, Garo.

Again, the subjects, for the sake of further comparison, have been divided into the following occu-

pational groups : (1) Manual labour and (2) Non-manual labouring class, i.e. those who do not live on manual labour. This division has been carried on both amongst the "caste Hindus" and amongst the "depressed castes" as well as amongst the Moslems and the aboriginals.

Amongst the caste Hindus I have dealt with 20 "manual labourers" and 10 who belong to the non-manual class. Thus, the total number of subjects of "caste Hindus" is 124. And amongst the depressed castes, the total number of "Manual labourers" is 24 and the number of "non-Manual class" is 8. Thus the total number of the subjects of the depressed castes in this paper is 32. Besides these, there are 10 Muhammadans or Moslems who belong to the "Manual labourer" class and 10 who fall in the category of "Non-manual class" Amongst the aboriginals, 13 subjects belong to the "Manual labourer" class and 1 belongs to the "Non-Manual labouring class." Thus the total number of Manual labouring class is 67 and Non-manual labouring class is 123. This makes the total number of subjects dealt with here 190.

The "All-caste" average is 9.81. c.m.; the range of variation is from 8.0 c.m. to 10.4 c.m. Taken separately, the caste-Hindus have got the average 9.35 c.m.; the depressed castes have 9.25 c.m.; the Muhammadans have 9.24 c.m.; the solitary aboriginal has 8.6 c.m. Amongst these, the caste-Hindu manual class has the maximum figure which is 9.80, as average, and barring the solitary abo-

original subject, the Muhammadan group has got the minimum figure. Now let us find out the results of biometric deductions between the different groups.

(i) *Stature* :—In the case of *Stature* amongst the four social groups of my subjects, the caste Hindus give 6.138 as the maximum *Standard Deviation* and the Muhammadans the lowest. Thus amongst the social groups the caste-Hindus have the greatest amount of variability. On the other hand, between the two occupational groups, the Non-manual-labouring class gives 6.491 S.D. This shows its variability.

Again, in the matter of *Coefficient of variation*, the caste Hindus, show highest figure, 3.71, and the Mohammedans the lowest, 2.82. As between the two occupational classes, the Non-manual labouring class has got a little higher figure than the other one.

As regards the aboriginals they come nearer to the manual-labouring class than to any other group. Comparing all the groups together, the Non-manual labouring class shows the highest amount of variation.

(ii) *Arm-length* :—In the matter of S.D. of arm-length amongst the social classes, the caste Hindus show the highest figure and the depressed castes the lowest. As between the occupational groups, the manual labourer class has the highest figure. Here, it is seen that in the matter of arm-length amongst the social classes, the caste

Hindus show the largest amount of variability, while amongst the occupational groups the manual labourer class shows the greatest amount of variability.

Regarding Variability, the manual labourer class shows the highest figure and the depressed caste group the least number. It shows the greatest amount of variability amongst the manual labouring class. Next in variability stands the caste Hindu group.

(iii) Hand-length :—As regards S.D. of *Hand-length* the Muhamnadans give the least number and the manual class the highest figure. Again, the figures in the table show that the caste-Hindus are more variable in this matter than the depressed castes.

In the matter of Variability, the Muhamnadan group shows the least variation, while the manual class shows the highest variation. As regards the caste-Hindus, their variability is higher than the depressed caste group, and comes next to the manual class.

(iv) Hand-breadth :—As regards S.D. of *Hand-breadth*, the aboriginals show the least amount of variability and the non-manual labouring class the maximum amount of Variability.

In the matter of Variability, the least amount of variability is to seen among the aboriginals and the highest among the non-manual labouring class.

Comparison of data.

Now, on reading the biometrical results obtained from the data, we find that the average stature

of all the subjects labelled in this paper as "All castes" is 164.15 c.m. the range of variation is from 150.6 c.m. to 179.2. c.m. On the other hand, taking the groups separately, we find that the 124 caste Hindu subjects are on the average 165.59 c.m., the 32 "depressed caste" subjects are on the average 161.73. c.m., the 20 Muhammadan subjects are on the average 161.92. c.m., the 14 aboriginal subjects are on the average 160.16. c.m. Again, taken as a class the 67 Manual labourers are on the average 161.7. c.m., the 123 Non-labouring class subjects are on the average 165.48. c.m.

The results arrived at show that amongst these subjects the Caste-Hindu group has the maximum figure while the aboriginal group has got the lowest number. As amongst the occupational groups, the non-manual labouring class has the higher figure.

As regards *Arm-length*, the average of "All-castes" is 74.55. c.m., the range of variation is from 68.0. c.m. to 97.7. c.m. Taking separately, the caste Hindu have the average of 74.88. the Depressed Castes group has the average of 73.66. the Muhamadans have 75.39, the aboriginals have 72.41, the Manual labourers have 73.68, the Non-Manual class has 75.02.

Among these, the Muhammadan group has got the maximum number and the aboriginals the lowest number. As amongst the occupational groups, the non-manual labouring class has got the highest figure.

As regards *Hand-length*, the average of "All-castes" is 17.13. c.m. the range of variation is from 15.1. c.m. to 20.1. c.m. individually, the caste-Hindus have the average of 17.23. c.m., the depressed castes have the average of 16.93. c.m., the Muhammadans 16.61 c.m., the aboriginals 17.42. c.m., the Manual labourers 17.16. c.m., the Non-manual labouring class 17.11. c.m. Amongst these, the aboriginals have the maximum number while the Muhammadans the lowest figure than the other group.

In the matter of *Hand-breadth*, the "All-castes" have 7.88. c.m. as average, the range of variation is from 7.1. c.m. to 9.8. c.m. Taken separately, the Caste-Hindus have the average of 7.9. c.m., the Depressed Caste group 7.81. c.m., the Muhammadans 7.8. c.m., the Non-manual labouring class 7.86 c.m. Amongst these, the aboriginals have the maximum figure, while the Muhammadans the lowest number. In the matter of *Hand-breadth* the manual class is nearer to the Caste-Hindus.

Again, on the matter of *Hand-index*, the "All-caste" average is 46.13. Taken individually, the Caste-Hindus have the average of 45.99, the depressed caste group 46.26, the Non-labouring class 46.06. Amongst these, the Muhammadans have the maximum number, the aboriginals the minimum figure. In this matter, there is not much difference between the Caste-Hindus and the Depressed Castes. Again, amongst the occupational groups, the manual class shows a slightly higher figure than the other.

Regarding *middle-finger-length* of 109 subjects,

(v) *Hand-index* :—As regards S.D. of *Hand-index*, the Depressed caste group gives the maximum figure ; hence it shows the greatest amount of Variability and the Aborigines show the least figure, hence it gives the least amount of Variability. On the other hand, there is not much difference between the two occupational groups.

In the matter of V, the Depressed Castes show the maximum figure of variation, and the Aborigines the least. Again, comparatively the manual labourer class is less variable than the non-manual one.

(vi) *Middle-finger length* :—In the matter of S.D. of *Middle finger length*, the caste Hindus show the maximum variability while the Muham-madans the least. Here, it is to be noted that variability amongst the social classes is not so great in the matter of middle-finger length.

Differences of means between the Caste Hindus and the Depressed Caste.

In the matter of *stature*, the difference of means between the Caste-Hindus and the Depressed Castes is 2.2697 c.m. and its S.E. is 1.4544. It is evident that the difference is not significant i.e. the Caste-Hindus are not taller than the Depressed Castes. The non-significance of the difference may be due to the small number of observations of the Depressed Caste group. Possibly there is a real difference. It can be verified by multiplying the number of observations from the Depressed Castes. In the matter of *arm length*,

the difference of means is 0.0297 and its S.E., is 1.0885. Here, the difference is not significant i.e. the Caste-Hindus have not longer — than the Depressed Caste group.

In the matter of *Hand length*, the difference of means is 0.3173 and its S.E. is 0.2509. The difference is not significant. In the matter of *Hand breadth*, the difference of means is 0.1959. and its S.E. is 0.0704. Here, the difference is significant i.e. the Caste-Hindus have got bigger hand-breadth.

In the matter of *Hand index*, the difference of means is 0.2774 and its S.E. is 0.6500. Here, the difference is not significant.

In the matter of *Middle-finger length*, the difference of means between the Caste-Hindus and the depressed castes is 0.4984 and its S.E. is 0.1690. Here, the difference is significant i.e. the Caste Hindu subjects have got longer middle-finger length than the Depressed Castes.

(vii) Difference of Means between the non-manual and manual classes amongst the Hindus i.e. amongst the Caste-Hindus and the Depressed Castes.

In the matter of *Stature* the difference of means between the non-manual and the manual classes amongst the Hindus is 2.6297 and its S.E. is 1.4543. Here, the difference is not significant i.e. the non-manual class is not really taller than the manual class. Possibly there is real difference on ground mentioned beforehand.

In the matter of *Arm-length* the difference of

means is 2.2903 and its S.E. is 1.0885. Here the difference is significant, the arm length of non-manual class is bigger than the manual class.

In the matter of Hand-length, the difference of means is 0.2116 and its S.E. is 0.2514. The difference is not significant.

In the matter of Hand-breadth, the difference of means is 0.2116 and S.E. 0.0744. Here, the difference is significant i.e. the hand breadth of the manual class is bigger than the non-manual class.

In the matter of Hand-index, the difference of means is -1.9201 and its S.E. is 0.6501. Here the difference is significant i.e. the hand index of the manual class is bigger than the non-manual class.

In the matter of Middle-finger length, the difference 0.0783 and its S.E. 0.1690. Here, the difference is not significant, i.e. the one is not longer than the other.

III. Differences of means between the Caste Hindus and the Muhammadans.

In the matter of stature, the difference of means between the caste Hindus and the Muhammadans is 2.6101 and S.E. is 1.2916. Here the difference is significant, i.e. the caste Hindus possess taller stature than the Muhammadans.

In the matter of Arm-length, the difference of means between the above two groups is -1.0351 and S.E. 1.1975. Here, the difference is not sig-

nificant. The one is not longer than the other.

In the matter of Hand-length, the difference is 0.6957 and its S.E. is 0.2203. Here, the difference is significant i.e. the hand-length of the caste Hindus is longer than the Muhammadans.

In the matter of Hand-breadth, the difference is 0.0950 and its S.E. 0.4422. The difference is not significant i.e. one is not larger than the other.

In the matter of Hand-index, the difference is 1.1830 and its S.E. 0.6571. The difference is not significant. The one is not larger than the other.

In the matter of Middle Finger-length the difference is 0.5100 and its S.E. is 0.1558. The difference is significant i.e. the middle finger-length of the caste Hindus is longer than the Muhammadans.

IV. Differences of means between the non-manual class and the manual class of the caste Hindus and the Muhammadan non-manual and manual classes.

In the — of stature, the difference is 1.0051 and S.E. is 1.2916. The difference is not significant. The one is not taller than the other.

In the matter of arm-length, the difference is 1.2851 and S.E. is 1.1975. The difference is not significant.

In the matter of Hand-length, the difference is 0.5148 and S.E. is 0.2203. The difference is significant i.e. the manual class possesses hand-length longer than the non-manual class. It is due to the fact that the hand-length of the manual class

of the caste Hindus as well as of the Muhammadans is longer than the hand-length of the non-manual class of caste Hindus of the Muhammadan class respectively.

In the matter of Hand-breadth, Hand index and middle finger-length there are differences.

V. Differences of means between the depressed castes and the Muhammadans.

There is no significant difference between the depressed castes and the Muhammadans in the somatic parts in question here.

VI. Differences of means between the non-manual and the manual classes of the depressed castes and of the Muhammadan corresponding classes.

There is only a significant difference in the matter of Hand-breadth. Its mean is -0.2916 with S.E. as 0.1144 i.e. the hand-breadth of the manual class is bigger than the non-manual class. It is due to the fact that the hand-breadth of the manual class of the depressed caste group as well as of the Muhammadan manual class, is respectively bigger than the non-manual class of the depressed castes and the Muhammadan corresponding class.

VII. Difference of Means between the manual and non-manual classes.

In the matter of Stature, the difference of mean is -3.7764 with S.E. as 0.8760. Here, the difference is significant i.e. the non-manual class is taller than the manual one.

In the matter of Arm-length, the difference of

mean is -1.3412 and its S.E. is 0.7440. The difference is not significant.

In the matter of Hand-length, the difference of mean is 0.0486 and its S.E. is 0.1650. The difference is not significant.

In the matter of Hand-breadth, the difference of mean is 0.1979 and S.E. is 0.4140. The difference is not significant.

In the matter of Hand-index, the difference is 0.0442 and its S.E. is 0.0570. The difference is not significant.

Now, let us enquire about the correlations between different somatic parts in question here.

(i) *Correlation between Stature and Arm-length.*

In this matter, the figures in the correlation table show that there are positive significant correlations in all the groups. This indicates that with the growth of stature there is a corresponding growth of arm-length.

(ii) *Correlation between Stature and Hand-length.*

This list in the table shows that there is a positive significant correlation in every group except the manual labourer class. This shows that in the matter of correlation between stature and hand-length, the All-Castes group, the Caste Hindus, the Depressed Castes, the non-manual labouring class show that with the growth of stature there is a corresponding growth in Hand-length; only in the case of the manual-labouring class there is no correlation.

(iii) *Correlation between Stature and Hand-breadth.*

In this matter, as shown in the table, there is a positive correlation in All-Castes group; while the groups taken individually do not show any correlation.

(iv) *Correlation between Stature and Hand-index.*

The table shows that in the case of All-Castes, caste Hindus and non-manual class there are negative correlations; this means, that with the increase in stature there is a decrease in Hand-index. Again, in the cases of manual class and depressed caste group there are no correlations. It is already seen that ■ there is positive correlation with Stature and Hand-length, therefore, there is no correlation between Stature and Hand-breadth. On this account, correlation between Stature and Hand-index is naturally negative.

(v) *Correlation between Arm-length and Hand-length.*

The list in the table shows that there is positive correlation between Arm-length and Hand-length in every group. That means, there is a corresponding growth between Arm-length and Hand-length.

(vi) *Correlation between Arm-length & Hand-breadth.*

The table shows that there is positive correlation between Arm-length and Hand-breadth in All-Castes, the manual labourer class and the non-manual labourer class.

(vii) *Correlation between Arm-length and Hand-index.*

There is no correlation in all the groups. As regards the Depressed Caste group, though the coeffi-

cient is greater than twice the S.E. yet according to the "t" test of Fisher it is not significant (owing to the smallness of the samples).

Here it is clear that as the breadth factor predominates the numerator, therefore there is no correlation in index.

Somatic Proportion.

Now, we come to the ■■■ of proportion that the somatic parts in question here bear with each other.

(i) It is evident from the table that, in the ■■■ of praportion between Stature and Arm-length, the All-Castes give the figure 2.20 i.e. the stature is more than twice the Arm-length. Again, in this matter, the Caste Hindus have nearly the same proportion as the Aborigines, while Depressed Castes have nearly the same proportion ■■■ the manual labourers.

(ii) In the matter of Stature and Head-length, the All-Caste figure is 9.58 i.e. is so much greater in proportion than the Head-length as given in the figure. In this matter, the Mohammedans show the maximum figure, and the aborigines the minimum figure, i.e. the proportions differ in these two groups as are given in the figure.

(iii) In the matter of Arm-length and Hand-length, the All-Caste figure is 4.35 i.e. the Arm-length is so much greater the Hand-length ■■■ is given in the figure. Again, in this matter, the Muhammadan group has got the maximum figure and the Aborigines the minimum figure.

(iv) In the matter of Arm-length and Hand-breadth, the All-Caste proportion is 9.46 i.e. the arm-length is so much greater than the hand-length as is given in the figure. Here the Muhammadan class tops the list while the Aborigines are at the lowest place.

(v) In the matter of Hand-length and Hand-breadth, the All-Castes give the proportion as 2.17 i.e. the hand-length is little over twice the hand-breadth. Here, the aborigines show the maximum figure and the Muhammadans the maximum figure.

(vi) In the matter of stature and middle finger length, the All-Castes group gives the proportion as 17.63 i.e. the stature is much greater the middle finger-length is given in the list. Here, the caste Hindus have the maximum figure and the depressed castes the minimum figure.

Somatic Relation in Percentage.

Now, we come to enquire about the somatic relations in percentage. In the table we see that arm-length of All-castes group and the Depressed Castes have the same figure, while the aborigines and the caste Hindus have the same figures. Again, the manual class has got the highest figure, on the contrary, the non-manual class has got the same figure, as the All-Castes and the Depressed Castes groups.

In the matter of hand-length in relation to stature, the All-Castes figure is 10.43; but the

aboriginals top the list, and the Mohammedans show the minimum figure.

In the matter of middle finger-length in relation to stature, the all-caste figure is 5.67. Here, the caste Hindus top the list and the depressed castes come next ■ it. While the All-Castes group has got the minimum figure.

In the matter of ratio between Hand-breadth and Hand-length expressed in percentage, the All-Castes figure is 46.08. Here, the Muhammedans top the list and the aboriginals show the minimum figure. In this matter, the All-Castes and the manual class have the identical figures. Again, the manual and the non-manual classes are similar to each other.

In the matter of ratio between Hand-breadth and arm-length expressed in percentage, the all-castes figure is 10.57. Here the aboriginals have the maximum figure and the Muhammedans the lowest figure. Again, the All-Castes, Caste-Hindus and the Depressed Castes stand very near to one another.

In the matter of ratio between Hand-length and Arm-length expressed in percentage, the All-Castes figure is 22.99. Here the aboriginals have the highest figure and the Muhammedans the lowest figure. Again, the All-Castes, the caste Hindus, and the Depressed Caste groups all have identical figures. Further, the manual and non-manual groups are very similar to each other.

Now, let us compare these figures with other peoples. Martin gives the following figures :—

Hand-length in percentage of whole arm-length.

| | | |
|---------|-----|------|
| Lolo | ... | 247 |
| Badener | ... | 24.0 |
| Brahman | ... | 24.8 |
| Toda | ... | 25.1 |

Here, we see, our Bengal subjects have the percentage in common with the Lolo and the Badener.

Again, Martin gives relative hand-length as follows :—

EUROPE :—

| | | |
|----------------|-----|------|
| Little Russian | ... | 10.0 |
| German | ... | 11.0 |
| Belgian | ... | 11.3 |
| Norwegian | ... | 11.8 |

ASIA :—

| | | |
|-------|-----|------|
| Lolo | ... | 9.8 |
| Tamil | ... | 10.8 |
| Sikh | ... | 10.7 |

In this matter most of our Bengal subjects have their relative hand length shorter than the Europeans and the Indian Sikhs yet longer than the Lolo and the Indian Tamils. Here, our aboriginal and manual class groups have their relative hand-length comparatively equal with the Sikhs and the Europeans.

Again, Martin gives relative arm-length (Ganze arm-length) thus:—

| | | | |
|-----------|------|----------------|------|
| Europe | ♂ | Asia | 43.2 |
| Norwegian | 43.8 | Japanese | 0 |
| German | 44.8 | Cochin-Chinese | 43.9 |

| | | | |
|-------------|------|---------------|------|
| French | 44.8 | Kirghis | 44.5 |
| Belgian | 45.5 | North Chinese | 45.2 |
| Lett | 44.9 | Kurd | 45.5 |
| Lithuanians | 47.1 | Tamjl | 46.8 |

In this matter, all the groups of our Bengal subjects have their relative arm-length bigger than the Europeans of the list except the Lithuanians. In Asia, they approach the North-Chinese, the Kurds and the Tamils.

Results ;—

Thus we are at the end of our enquiry. Here — find that in the case of our 190 subjects, the average stature is 164.15 c.m., i.e., it is below the average (Mittel) that Martin gives for man which is 165.0 c.m.; and it falls within the group of his Mittel-Gross 164.0 - 166.9 c.m. size. That means, these subjects in average — medium-sized. But the groups taken separately show that the caste Hindus have reached the standard required, i.e. they fall within the "average" group of Martin. The same is the case with the non-manual class. But dividing the caste Hindus into non-manual and manual groups it is to be seen that the non-manual section of the caste Hindus numbering 104 subjects have 166.09 as average. This group has got the stature taller than the average required. On the other hand, the shortest people are the aboriginals; they are 160.16 c.m. in average i.e. they fall within the "untermittel gross" size (below average) of Martin.

Here, it is to be noted that the caste Hindus and the non-manual class have nearly the same average stature. They come up to the average standard as given by Martin. But a glance at the table of data will show that out of 190 subjects the Caste-Hindus number 124, while amongst them only 20 are manual labourers, and the remaining 104 are non-manual working people. And this group tops the list in average. On the other hand, the non-manual class total 123, while amongst them only 19 belong to the groups other than the "Caste Hindus." Thus, the number of the Caste-Hindus nearly equals the number of the non-manual class. This gives the coincidence.

Again, the depressed class group and the Mohammedans have nearly the same averages. Here again is a coincidence. But by comparing the difference of means of these two groups it has been found that there is no significant difference between both in the somatic parts in question here.

Again, dividing the depressed castes into manual non-manual groups, we find that the average stature of the 24 manual labouring subjects is 161.19 and that of the 8 non-manual subjects is 193.32. Here, we again see the phenomenon that the average of the depressed non-manual class subjects rises higher than the manual subjects of the same castes.

Further, the averages of the Muhammadan group in most cases approximate the averages of the

depressed castes as said before and also of the manual class, though its number is divided equally between both the professional groups. Here, the phenomenon is to be observed that the stature of the Muhammadan manual class is comparatively higher than that of the non-manual class. In the matter of average of arm-length, the Muhammadan manual class has got the highest figure; next to it comes the depressed caste non-manual group on the other hand, the caste Hindus, the Muhammadans and the non-manual labouring class, the caste Hindu non-manual class approximate each other.

Here again, there is a similarity between these groups. And most of the subjects of these groups come from the same economic class. Hence, this approximation is not to be wondered at. Further, the caste-Hindu manual-class and the depressed caste manual group approach each other in most of the averages. Again this is a coincidence that appears to have an economic basis.

In the matter of hand-length, it may be said that with the exception of the Muhammadan non-manual class, the groups are not very similar to each other. Again, the difference of mean between the two classes is not significant. The same is the case with the Muhammadans. In the case of hand-breadth, the depressed castes and the groups approximate each other in average. Here, the caste-Hindu manual and non-manual classes have identical averages. In the matter of Hand-index most of the groups approach each other. Here, the

manual and non-manual classes have almost identical averages.

Again, the Muhammadans in general and the Depressed-Caste manual-class have almost the identical averages. Again, the depressed class in general and the Muhammadan manual class have almost the identical averages. The cause of this coincidence has been referred to above.

In the matter of middle finger-length, the averages of most of the given groups except the Muhammadan manual class, the Caste-Hindu manual and non-manual groups, near each other. But of these, the averages of the Depressed Castes and the Muhammadans are almost identical. Again, the average of the caste Hindus is comparatively higher than that of the other social classes. But the caste Hindu manual class has got the maximum average. Probably the smallness of the number is accountable for it.

Comparison with other peoples.

Now let us enquire into the results arrived at in such like somatic matters with other peoples. Martin, gives the hand-index of different peoples as follows :—

| | | | |
|-----------|------|----------|------|
| Europe | ♂ | Asia | ♂ |
| French | 42.7 | Chinese | 40.6 |
| Icelander | 46.5 | Malay | 41.2 |
| Badener | 48.1 | Annamita | 44.7 |
| Arab | 44.8 | Japanese | 48.5 |

In our enquiry we have found out that the average hand-index of our Bengali-speaking sub-

jects of "All-castes" is 46.13. Thus, this index is greater than that of the French and is nearly the same with the Icelanders and is greater than that of the Asiatics. But the hand-indices of our Muhammadan and Depressed-Caste manual group are bigger than that of the Icelanders. Again, all the groups in our table have greater hand indices than those of the Asiatics given in Martin's list.

As regards middle finger-length Martin, gives the following figures in M.M. :—

Lithuanians 105; Letts 106; Jews 90; Ananites 90; Chinese 98; Bushmen 84.

Here, we see that — All-castes index is 98.1 M.M. and it is higher than of those given in Martin except the Lithuanians and the Letts.

Again, Martin³ gives the dimensions of hand in M.M. with different occupations in relation with stature.

| Occupation. | Stature. | Hand-length. | Hand-breadth. | Hand-index |
|-------------|-------------|--------------|---------------|------------|
| Smith. | X.1660-1689 | 187 | 88 | 46.95 |
| Keymaker | 1660-1689 | 192 | 88 | 46.27 |

In our case, the indices of the Bengal subjects given in M.M. are as follows :—

| Stature | Hand-length | Hand-breadth | Handindex. |
|--------------------------|-------------|--------------|------------|
| 1641.5 | 171.2 | 78.77 | 45.23 |
| (All castes) | 171.9 | 79.0 | 45.04 |
| 1600.9 | | | |
| (Caste Hindu non-manual) | 171.5 | 79.06 | 45.25 |
| 1617.0 | | | |
| Manual class) | | | |

Here, we see that our All-caste subjects of lesser stature than those of Martin have smaller hand-length hand-breadth, but the index is nearly similar with that of the Key-maker group and not very far removed from that of the Smith group; again the caste-Hindu non-manual subjects have also lesser hand-length and breadth and have got nearly similar index with the Key-maker. Further, our manual class group has got lesser hand-length and breadth than those of Martin's manual class but its index is almost the same with that of the Key-maker class who have higher stature.

As regards stature, Martin⁴ gives the following list of the Middle group (160.0-169.9)

| Europe | ♂ | Asia | ♂ |
|---------------------|-------|-----------|-------|
| Pölish Jews | 161.0 | Chinese | 161.1 |
| Spaniards | 162.0 | Baltic | 162.1 |
| Italians in general | 164.0 | Syrians | 162.8 |
| Poles | 164.5 | Tatars | 163.0 |
| Russians in general | 166.0 | Kalmuks | 163.0 |
| Belgians | 165.5 | Brahmins | 165.9 |
| Bavarians | 165.6 | Armenians | 166.1 |

Here, we see, that our "All-castes" index is higher than those of the Jews, Spaniards and the Italians of Europe and those of Asiatics other than the Brahmins and the Armenians. That is, in general our Bengal subjects have higher stature than some of the South-European and East-Asiatic and West-Asiatic peoples, and the caste-Hindu non-manual class with the average of 166.09 is taller

than all the Europeans in this list except the Bavarians with whom it is similar, and is also similar with the Brāhmins of the list as well as with the Armenians.

Again, if we take our "Caste Hindu" and the "non-manual" class, we find that these two groups are similar in stature with the Belgians and are very slightly taller than the Russians, and are decidedly taller than the South-Europeans mentioned above; while in Asia they stand next to the Brāhmins and the Armenians.

CONCLUSION.

From our above enquiry we arrive at the conclusion that the caste-Hindus are not dissimilar with the depressed castes in the somatological matters that are dealt with here, with the exception of possessing larger hand-breadth and longer middle finger-length and with the probability of having taller stature.

Again, if compared with the Mohammadans, the caste-Hindus are taller and have longer hand-length and middle-finger length.

Comparing the depressed castes and the Muhammadans we find that there is no significant difference between them.

Comparing the non-manual and the manual classes amongst the Hindus in general, we find that one is not taller than the other. But the non-manual class has got bigger arm-length. On the contrary the manual class has got larger hand-breadth and hand-index,

Comparing the occupational groups of the caste Hindus and the corresponding Muhammadan groups, we find that only in the matter of hand-breadth the manual class has got bigger size than the non-manual one.

But by comparing the manual class in general with the non-manual class in general, it is seen that the non-manual class has got only bigger stature. There is no other difference.

Here, the crux of the whole thing is the comparative tallness of the upper classes, i.e. the caste-Hindus and the non-manual class.

This may be due to the economic and environmental factors in which these groups have been brought up. Regarding it, Martin says "It is worthwhile to notice the influence of general hygienic and existence conditions made on the individual as well as on the entire race." Then he further says that, it has been proved in the factory districts of Great Britain that bodily degeneration does take place.² Also he says³ that in Paris, the districts peopled by poorer classes return shorter stature than of those districts peopled by better situated classes.

Further, Martin⁴ gives a table comparing the above classes which speaks for itself.

| <i>Stature.</i> | <i>Italy</i> | <i>North France.</i> | <i>France in General.</i> | <i>England</i> | <i>Spain.</i> |
|-----------------|--------------|--------------------------|-------------------------------|----------------|---------------|
| Students. | 166.9 | 169.7 | 168.7 | 172.4 | 163.9 |
| Labourers. | 164.4 | 165.0 | 164.4 | 169.8 | 159.8 |

1-4. Martin—"Lehrbuch der Anthropologie" Bd I. pp. 252-398.

1-4. Martin—*Ibid* pp. 264-265.

In the above table ■ see that the workers have shorter stature than the students who generally come from better situated classes and live in better conditions.

It is natural that the ■■ hygienic factors and conditions of living, would work amongst the Bengal subjects in question here. Hence it is clear that the cause of this difference between our social and occupational classes may be said to be due to the difference of the conditions of life in which they live.

Anthropometric Measurements.

| Serial No. | Name. | Caste. | Religion. | District. | Age. | Stature. | Arm- Length. | Hand- Length. | Hand- Breadth. | Head- Index. | Profession. |
|------------|----------------------|-------------------|-----------|-----------|------|----------|-----------------|------------------|-------------------|-----------------|----------------|
| 1 | Jasoda Dey | Subarnabanik | Hinduism | Bentura | 41 | 173.6 | 83.4 | 20.1 | 9.8 | 48.8 | Business |
| 2 | Nandalal Thakur | Gujargour Brahmin | " | " | 22 | 166.7 | 86.9 | 17.0 | 7.7 | 45.3 | Land-holder |
| 3 | Rampada Rana | Nepit | " | " | 30 | 154.5 | 81.1 | 17.5 | 9.7 | 55.4 | Brick-layer |
| 4 | Syed Md. Ali | Muslim | Islam | " | 33 | 160.3 | 71.2 | 15.8 | 8.3 | 52.5 | Merchant |
| 5 | Hanumanadas Thakur | Gour Brahman | Hinduism | " | 22 | 162.1 | 75.6 | 17.2 | 8.0 | 46.5 | " |
| 6 | Ganesh Bagdi | Tentule Bagdi | " | " | 27 | 162.2 | 75.0 | 18.2 | 8.4 | 46.2 | Chaffeur |
| 7 | Asutosh Ganguly | Rahri Brahman | " | " | 34 | 162.7 | 74.7 | 18.5 | 8.5 | 46.0 | Clerk |
| 8 | Govinda Acharya | Utkal Brahman | " | " | 24 | 163.0 | 67.9 | 17.8 | 8.0 | 44.9 | Cultivator |
| 9 | Lalbehari Sett | Tili | " | " | 50 | 155.2 | 71.5 | 17.2 | 8.1 | 47.1 | Teacher |
| 10 | Govinda Mullik | Gandhabanik | " | " | 26 | 161.0 | 70.2 | 23.1 | 8.5 | 36.8 | Cultivator |
| 11 | Hoffa | Santal | Tribal | " | 30 | 165.4 | 73.8 | 17.7 | 8.2 | 46.3 | " |
| 12 | Provat Dey | Subarnabanik | Hinduism | " | 27 | 161.7 | 70.5 | 18.0 | 8.2 | 43.6 | Teacher |
| 13 | Radhika Chandra | Gandhabanik | " | " | 44 | 155.7 | 71.2 | 16.7 | 7.9 | 47.3 | Cultivator |
| 14 | Rasiklal Halder | " | " | " | 44 | 159.6 | 71.3 | 16.5 | 9.0 | 54.6 | Merchant |
| 15 | Bibonlal Dey | Subarnabanik | " | " | 40 | 156.5 | 72.3 | 17.7 | 7.9 | 44.6 | Goldsmith |
| 16 | Abinash Modak | Modak | " | " | 27 | 153.7 | 66.8 | 16.7 | 7.7 | 46.1 | Cultivator |
| 17 | Surya Modak | " | " | " | 42 | 168.3 | 67.0 | 16.2 | 7.9 | 48.8 | Confessioner |
| 18 | Ayodhya Dey | Subarnabanik | " | " | 53 | 162.2 | 79.1 | 19.0 | 8.5 | 44.7 | " |
| 19 | Ashu Ganguly | Rahri Brahman | " | " | 23 | 156.6 | 71.3 | 16.0 | 7.6 | 47.5 | Priest |
| 20 | Robini Kumar Sinha | D. R. Kayastha | " | " | 27 | 152.0 | 71.0 | 16.8 | 7.9 | 47.0 | Menial servant |
| 21 | Suhram De | Subarnabanik | " | " | 30 | 156.5 | 73.6 | 17.8 | 8.2 | 46.1 | Goldsmith |
| 22 | Maha Bhuiya | Bhuiya | " | " | 24 | 170.0 | 70.0 | 17.5 | 7.8 | 44.8 | Cultivator |
| 23 | Jatindra Nath Mullik | Gandhabanik | " | " | 32 | 170.6 | 77.9 | 17.7 | 8.0 | 45.2 | " |
| 24 | Nemai | Kora | " | " | 32 | 168.1 | 67.3 | 15.8 | 7.8 | 49.4 | Labourer |
| 25 | Saina Majhi | Santal | " | " | ■ | 169.2 | 69.7 | 16.4 | 7.4 | 45.1 | " |

Anthropometric Measurements.

| Serial No. | Name. | Caste. | Religion. | District. | Age. | Stature. | Arm-length. | Hand-length. | Hand-breadth. | Hand-index. | Profession. |
|------------|-----------------------|-------------------|-----------|-----------|------|----------|-------------|--------------|---------------|-------------|-------------------|
| 26 | Tuanbow Dhabal Babu | Chatrī | Hinduism | Bankura | ■ | 162.1 | 70.9 | 18.6 | 7.7 | 41.4 | Pensioner |
| 27 | Broja Sardar | Bhumi | " | " | 34 | 166.2 | 76.1 | 17.6 | 7.8 | 44.3 | Headman |
| 28 | Keshob Kora | Kora | " | " | 35 | 162.7 | 68.6 | 17.4 | 7.8 | 44.8 | Labourer |
| 29 | Mangobind Dhabal B. | Chatrī | " | " | 42 | 263.0 | 74.1 | 18.7 | 8.6 | 46.0 | Pensioner |
| 30 | Dinu Bauri | Bauri Dhula | " | " | 60 | 155.2 | 67.7 | 17.0 | 7.9 | 46.5 | Labourer |
| 31 | Surendra N. Mukherjee | Rabari Brahmin | " | " | 23 | 161.0 | 72.9 | 15.9 | 7.5 | 47.2 | Cultivator |
| 32 | Potal Manji | Santal | Tribal | " | 28 | 166.4 | 74.2 | 17.8 | 8.0 | 44.9 | Labourer |
| 33 | Mahesh Manji | " | " | " | 30 | 161.7 | 74.0 | 17.8 | 8.3 | 46.6 | " |
| 34 | Fagur Manji | " | " | " | 35 | 155.7 | 75.4 | 18.7 | 8.3 | 44.4 | " |
| 35 | Thokra Manji | " | " | " | 50 | 169.6 | 81.2 | 18.8 | 7.9 | 42.0 | " |
| 36 | Sin Manji | " | " | " | 35 | 168.5 | 73.9 | 17.6 | 8.0 | 45.7 | " |
| 37 | Ohonorow Manji | " | " | " | ■ | 159.1 | 68.2 | 17.7 | 8.1 | 45.8 | " |
| 38 | Brindaban Sinha | Chatrī | Hinduism | " | 75 | 168.3 | 76.6 | 17.9 | 8.7 | 48.6 | Pensioner |
| 39 | Surendra N. Ganguly | Rabari Brahman | " | " | 42 | 162.2 | 75.5 | 17.5 | 8.1 | 46.3 | Priest |
| 40 | Atul Chandran Chand | Gandhaban | " | " | 23 | 156.8 | 72.0 | 16.6 | 8.0 | 48.2 | Grocer |
| 41 | Pitam Mahji | Santal | Tribal | " | 37 | 152.0 | 66.9 | 17.3 | 7.7 | 44.5 | Labourer |
| 42 | Sheikh Mofisuddin | Sheik Muslim | Muslim | " | 28 | 166.6 | 71.3 | 17.4 | 7.6 | 43.1 | Tailor |
| 43 | Ramdas Chakrabarty | Rabari Brahman | Hinduism | " | 48 | 170.0 | 79.0 | 18.4 | 8.7 | 47.3 | Med. Practitioner |
| 44 | Sarat Chatterjee | " | " | " | 22 | 170.8 | 78.0 | 17.0 | 8.2 | 48.2 | Student |
| 45 | Saibu Ghose | " | " | " | 34 | 168.1 | 70.6 | 17.3 | 7.9 | 45.7 | Med. Practitioner |
| 46 | Sudhir Ghose | " | " | " | 30 | 169.2 | 74.9 | 17.5 | 7.9 | 45.1 | Merchant |
| 47 | Nakul Paul | " | " | " | 22 | 163.4 | 72.2 | 17.0 | 7.5 | 44.1 | Med. Practitioner |
| 48 | Biraja Mukherjee | Rabari Brahman | " | " | 25 | 170.5 | 78.7 | 18.9 | 7.5 | 44.4 | Contractor |
| 49 | Joyram Nandi | Moira | " | " | 22 | 167.6 | 76.7 | 18.6 | 7.5 | 40.6 | Merchant |
| 50 | Kalicharan Das | Tantubaya (Tanti) | " | " | 45 | 160.0 | 97.7 | 17.4 | 7.9 | 45.4 | Weaver |

Anthropometrical Measurements.

Correlations of Anthropometric Measurements. 31

| Name. | Caste. | Religion. | District. | Age. | Stature. | Arm- Length. | Hand- Length. | Hand- Length. | Hand- Breadth. | Hand- Index. | Profession. |
|--------------------------|-------------------|-----------|-----------|------|----------|-----------------|------------------|------------------|-------------------|-----------------|-------------------------|
| 51 Satis Roy | Khaira | Hinduism | Bankura | 25 | 164.8 | 72.4 | 19.0 | 7.8 | 41.1 | | Labourer |
| 52 Charu Son | D. Bahri Kayastha | " | " | 43 | 164.8 | 74.2 | 16.2 | 8.5 | 52.5 | | Clerk |
| 53 Bepin Siroir | " | " | " | 50 | 161.1 | 67.5 | 17.3 | 7.6 | 43.9 | | Cultivator |
| 54 Bhusan Bauri | Mana Bauri | " | " | 23 | 161.1 | 72.3 | 15.1 | 8.1 | 53.6 | | Labourer |
| 55 Jogindra Bauri | Dhula Bauri | " | " | 23 | 165.0 | 71.7 | 16.2 | 8.2 | 50.6 | | " |
| 56 Thakurdas | Santal | Tribal | " | 55 | 162.5 | 72.5 | 17.3 | 7.9 | 45.7 | | " |
| 57 Pratulla Mallik | D. Bahri Kayastha | Hinduism | " | 28 | 164.5 | 61.6 | 16.7 | 8.0 | 47.9 | | Cultivator |
| 58 Trinowri Datta | " | " | " | 40 | 175.4 | 76.7 | 17.2 | 8.2 | 47.7 | | " |
| 59 Rampada Gorai | Kahn | " | " | 35 | 169.9 | 76.3 | 18.4 | 7.6 | 41.3 | | " |
| 60 Kune Bedia | Bedia | " | " | 28 | 166.3 | 77.7 | 17.8 | 8.0 | 44.9 | | Snake Charmer |
| 61 Bekhari Bedia | " | " | " | 27 | 155.9 | 69.6 | 18.1 | 7.2 | 44.7 | | Bedia (gypsy) like life |
| 62 Birendra Ghose | D. Bahri Kayastha | " | " | 41 | 168.3 | 77.3 | 17.1 | 7.8 | 45.6 | | Labourer |
| 63 Benomali | Bauri | " | " | 45 | 163.2 | 73.0 | 16.7 | 8.1 | 48.5 | | " |
| 64 Bali Ghose | D. Bahri Kayastha | " | " | 71 | 164.7 | 70.0 | 17.3 | 7.9 | 45.7 | | Lawyer |
| 65 Nripendra Ghose | " | " | " | 32 | 161.7 | 71.5 | 16.1 | 7.3 | 48.4 | | Contractor |
| 66 Prabodh Dutt | Tamli | " | " | 40 | 162.5 | 73.0 | 17.0 | 7.7 | 45.3 | | Lawyer |
| 67 Ganesh | Mana Bauri | " | " | 23 | 153.1 | 65.2 | 16.2 | 7.6 | 45.9 | | Labourer |
| 68 Prankrishna Pranaik | Napit | " | " | 41 | 153.6 | 70.3 | 17.3 | 8.2 | 47.4 | | Cultivator |
| 69 Gori | Bauri | " | " | 23 | 161.5 | 72.5 | 16.8 | 7.7 | 45.8 | | Labourer |
| 70 Jyotis Rajak | Bajak (Dhoka) | " | " | 36 | 158.3 | 72.0 | 16.8 | 7.7 | 45.8 | | Washerman |
| 71 Jatindra N. Sen Gupta | Vaidya | " | " | 48 | 172.6 | 65.3 | 17.3 | 7.9 | 45.7 | | Business |
| 72 Ratan Ray | Samantha Chettri | " | " | 26 | 158.9 | 72.9 | 15.7 | 7.3 | 46.5 | | Cultivator |
| 73 Sedai Roy | " | " | " | 30 | 155.0 | 71.6 | 16.5 | 7.6 | 47.3 | | " |
| 74 Umesh Bauri | Mana Bauri | " | " | 40 | 162.4 | 75.1 | 17.0 | 8.0 | 47.1 | | Labourer |
| 75 Roja Bauri | Shikbaria Bauri | " | " | 30 | 157.7 | 73.0 | 17.8 | 7.8 | 43.8 | | " |

Anthropometrical Measurements.

| No. | Name. | Caste. | Religion. | District. | Age. | Stature. | Arm Length. | Hand Length. | Hand Breadth. | Hand Index. | Profession. | Middle Finger Length. |
|-----|-------------------------|-------------------|-----------|-------------|------|----------|-------------|--------------|---------------|-------------|-------------|-----------------------|
| 76 | Ramendra Ghose | D. Bahri Kayastha | Hinduism | Bankura | 25 | 165.0 | 72.9 | 17.0 | 7.7 | 47.1 | Student | |
| 77 | Bidhubhadr Sen | Bangaja Kayastha | " | " | 22 | 165.9 | 68.3 | 15.4 | 7.3 | 47.4 | Clock | |
| 78 | Jugal Kishore Chatterji | R. Brahmin | " | " | 23 | 165.8 | 69.2 | 17.1 | 7.4 | 48.3 | " | |
| 79 | Umesh Chakravarty | Vaidik Brahmin | " | " | 27 | 171.9 | 70.2 | 18.0 | 8.0 | 44.4 | Broker | |
| 80 | Nirode K. Mukherjee | R. Brahmin | " | " | 29 | 171.3 | 78.2 | 17.1 | 7.9 | 46.2 | Service | |
| 81 | Makhan Lal Ray | D. R. Kayastha | " | " | 32 | 172.0 | 79.8 | 18.3 | 8.0 | 47.0 | " | |
| 82 | Kalpade Ghatak | R. Brahmin | " | Dacca | 31 | 172.0 | 79.8 | 18.3 | 7.7 | 46.7 | " | |
| 83 | Purno Ch. Chatterjee | " | " | Jessore | 26 | 167.4 | 70.6 | 16.6 | 7.7 | 44.8 | " | |
| 84 | Robati M. Sarkar | Bangaja Kayastha | " | Dacca | 30 | 172.4 | 80.7 | 17.4 | 7.9 | 46.5 | Sailor | |
| 85 | Malabhat Ali Sheikh | Mussalman | Islam | " | 38 | 163.8 | 70.9 | 17.0 | 8.2 | 48.4 | Service | |
| 86 | Harsundar Roy | Mahabha | Hinduism | Rangpur | 22 | 162.0 | 75.1 | 16.8 | 8.2 | 41.8 | Landholder | |
| 87 | Patinidhar Sarker | Shoikh | Islam | Rajshahi | 32 | 163.4 | 78.0 | 19.7 | 7.2 | 46.9 | " | |
| 88 | Satis Maitra | Barendra Brahman | Hinduism | Chittagong | 38 | 159.8 | 71.3 | 15.7 | 7.8 | 43.7 | " | |
| 89 | Abmofulla Syed | Syed (Moslem) | Islam | Rangpur | 35 | 160.0 | 78.8 | 17.2 | 7.7 | 44.8 | " | |
| 90 | Kaliprosanna Banerjee | R. Brahmin | Islam | Muraiddabad | 29 | 168.8 | 74.7 | 16.5 | 7.9 | 47.9 | " | |
| 91 | Radha N. Biswas | Mahishya | " | Tippera | 43 | 167.4 | 77.2 | 17.1 | 7.7 | 46.0 | " | |
| 92 | Upendra Roy | Bangaja Kayastha | " | Pabna | 38 | 163.1 | 74.4 | 16.4 | 6.9 | 43.1 | " | |
| 93 | Satis Ch. Gula | " | " | " | 33 | 157.4 | 69.3 | 15.6 | 7.8 | 50.0 | " | |
| 94 | Chaitanya Acherjee | Acharya Brahmin | " | " | 30 | 168.2 | 74.0 | 15.9 | 7.6 | 47.8 | " | |
| 95 | Srinath Ghose | Bangaja Kayastha | " | Rangpur | 39 | 174.5 | 84.7 | 17.6 | 7.5 | 42.6 | Service | |
| 96 | Masiruddin Sarkar | Moslem | Islam | " | 40 | 169.2 | 75.4 | 16.7 | 9.0 | 53.9 | Cultivator | |
| 97 | Sabajuddin Sarkar | Sheikh (Moslem) | " | " | 24 | 163.0 | 83.9 | 17.6 | 8.4 | 48.0 | " | |
| 98 | Gangla | " | " | " | 23 | 167.9 | 80.3 | 17.9 | 8.1 | 45.3 | " | 9.0 |
| 99 | Srikanta Barman | Khatiya Rajbanshi | Hinduism | " | 35 | 164.1 | 80.6 | 16.9 | 8.6 | 51.6 | Service | 9.6 |
| 100 | Afauddin | Sheikh (Moslem) | Islam | " | 33 | 167.3 | 75.3 | 16.8 | 7.7 | 47.2 | Cultivator | 9.4 |

| Serial No. | Name. | Caste. | Religion. | District. | Age. | Stature. | Arm Length. | Hand Length. | Hand Breadth. | Hand Index. | Profession. | Middle Finger Length. |
|------------|------------------------|--------------------|-----------|------------|------|-----------|-------------|--------------|---------------|-------------|-------------------|-----------------------|
| 101 | Mofinuddin Sartar | Sheikh (Moslem) | Islam | Rangpur | 24 | 167.277-6 | 15.4 | 7.9 | 48.2 | | Cultivator | 9.0 |
| 102 | Jitendra N. Chatterjee | " | Hinduism | Faridpur | 25 | 162.275-4 | 16.0 | 7.8 | 48.8 | | Student | 8.6 |
| 103 | Sudhanu S. Lahiri | R. Brahmin | " | Pabna | 28 | 172.275-5 | 17.1 | 7.5 | 43.9 | | Clark | 9.5 |
| 104 | Bhabesh Ch. Roy | Varandra Brahmin | " | Dacca | 39 | 168.276-1 | 16.8 | 8.2 | 48.8 | | Kaviraj | 9.4 |
| 105 | Suresh Ch. Das Gupta | Vaidya | " | Pabna | 45 | 164.273-3 | 17.7 | 8.0 | 45.3 | | Lawyer | 9.9 |
| 106 | K. Gupta | " | " | Dibragarh | 27 | 175.077-0 | 17.7 | 7.6 | 42.9 | | Cultivator | 9.9 |
| 107 | Sudhanu M. Chandra | " | " | Mymensing | 30 | 159.569-7 | 15.8 | 7.6 | 48.1 | | Business | 8.0 |
| 108 | Bimal Ch. Sen | Bangaj Kayastha | " | Faridpur | 23 | 167.176-5 | 16.3 | 7.8 | 48.4 | | Student | 9.8 |
| 109 | Jaunni Roy | Vaidya | " | Guradado | 50 | 162.271-0 | 15.4 | 7.4 | 48.1 | | Service | 8.1 |
| 110 | Sasi M. Bhattacharjee | Kulin Sadgop | " | Comilla | 36 | 166.574-9 | 16.7 | 7.7 | 46.1 | | Med. Practitioner | 9.5 |
| 111 | Jamiruddin | R. Brahmi | " | Rangpur | 28 | 157.070-8 | 16.3 | 7.7 | 47.2 | | Tailor | 9.4 |
| 112 | Nirasa | Sheikh-Moslem | Islam | " | 23 | 156.875-3 | 16.2 | 7.6 | 46.9 | | " | 8.6 |
| 113 | Surendra N. Das | " | " | Pabna | 22 | 166.675-9 | 16.7 | 7.9 | 47.3 | | Service | 9.2 |
| 114 | Satis Barman | Bangaj Kayastha | Hinduism | Rangpur | 29 | 163.071-8 | 16.5 | 8.0 | 49.1 | | Cultivator | 9.1 |
| 115 | Manuddin | Khatriya Rajbanshi | " | " | 40 | 165.586-1 | 17.5 | 7.8 | 44.8 | | " | 9.8 |
| 116 | Khagendra Barman | Sheikh Moslem | Hinduism | " | 48 | 150.571-1 | 15.8 | 7.9 | 50.0 | | " | 8.4 |
| 117 | Surendra N. Sen Gupta | Varandra Vaidya | " | Makla | 40 | 164.773-8 | 17.4 | 7.8 | 44.8 | | Teacher | 9.8 |
| 118 | Sarada K. Das | Bangaj Kayastha | " | Noakhali | 40 | 166.979-0 | 17.5 | 7.6 | 43.4 | | " | 9.4 |
| 119 | Kahirode N. Mazumdar | Sutradhar | " | Pabna | 40 | 150.672-1 | 16.6 | 7.6 | 45.8 | | " | 9.3 |
| 120 | Bhupes Roy | Bangaj Kayastha | " | Bakherganj | 33 | 163.477-1 | 17.2 | 7.4 | 43.0 | | " | 9.4 |
| 121 | Rajendra Barman | Khatriya Rajbanshi | " | Rangpur | 36 | 156.773-1 | 15.8 | 7.7 | 50.0 | | Service | 8.9 |
| 122 | Serajuddin | Sheikh Moslem | Islam | " | 25 | 154.572-0 | 15.7 | 7.3 | 46.5 | | Excise Peon | 9.3 |
| 123 | Umarali | " | " | " | 26 | 165.377-5 | 17.6 | 8.0 | 45.5 | | Cultivator | 10.1 |
| 124 | Prafulla K. Das | Bangaj Kayastha | Hinduism | Pabna | 25 | 170.875-9 | 18.0 | 7.8 | 43.3 | | Business | 10.1 |
| 125 | Ramaoath Roy | Khatriya Rajbanshi | " | Rangpur | 27 | 162.676-6 | 18.1 | 7.5 | 40.3 | | Mutdar | 9.2 |

| Serial No. | Name. | Caste. | Religion. | District. | Age. | Stature. | Arm Length. | Hand Length. | Hand Breadth. | Hand Index. | Profession. | Middle Finger Length. |
|------------|---------------------|-------------------|-----------|-------------|------|----------|-------------|--------------|---------------|-------------|-------------|-----------------------|
| 126 | Nibran Pal | Bangaj Kayastha | Hinduism | Pabna | 32 | 154.2 | 80.6 | 17.9 | 7.9 | 43.5 | Business | 8.9 |
| 127 | Gour Kundu | Varendra Tili | " | " | 45 | 162.6 | 76.6 | 18.1 | 7.3 | 40.3 | " | 9.2 |
| 128 | Durley Ch. Barman | Khatziya Rajbanst | " | Rangpur | 47 | 168.0 | 79.8 | 17.5 | 8.0 | 45.7 | Cultivator | 10.3 |
| 129 | Ainuddin Sheikh | Moslem | Moslem | " | 22 | 160.8 | 74.9 | 16.4 | 7.6 | 48.3 | Business | 9.4 |
| 130 | Heran Das | D. R. Kayastha | Hinduism | Faridpur | 27 | 163.8 | 78.4 | 16.9 | 8.2 | 49.1 | Service | 9.6 |
| 131 | Upendra Kundu | Varendra Tili | " | Rangpur | 26 | 162.4 | 78.1 | 17.5 | 7.8 | 44.6 | " | 9.1 |
| 132 | Nagendra N. | Varendra Brahmin | " | Pabna | 33 | 168.0 | 75.8 | 18.4 | 7.9 | 46.3 | Business | 9.1 |
| 133 | Chakrabhatty | Varendra Kayastha | " | " | 22 | 153.2 | 73.6 | 15.4 | 7.7 | 40.0 | Student | 8.7 |
| 134 | Sachin Raha | " | " | " | 25 | 163.9 | 75.4 | 18.0 | 8.2 | 45.6 | Teacher | 9.6 |
| 135 | Kisori Sarkar | Namasudra | " | Bakhor Gauj | 36 | 166.3 | 73.4 | 16.8 | 8.4 | 40.0 | Carpenter | 10.0 |
| 136 | Behari Mandal | Shetk | Moslem | Pabna | 25 | 158.5 | 73.7 | 16.0 | 7.7 | 48.1 | Teacher | 8.6 |
| 137 | Md. Abdur Rahman | " | " | " | 50 | 163.7 | 76.6 | 16.7 | 7.6 | 45.6 | Cultivator | 9.6 |
| 138 | Md. Idrisali | " | " | " | 22 | 155.0 | 69.3 | 15.6 | 7.5 | 48.1 | Teacher | 8.8 |
| 139 | Dinobandhu Acharja | Sakdwipa Brahmin | Hinduism | Rajshahi | 25 | 172.4 | 77.4 | 16.9 | 7.5 | 44.9 | Presbiter | 8.6 |
| 140 | Sudhansu Sanyal | Varendr Brahmin | " | Pabna | 25 | 166.5 | 71.0 | 16.9 | 7.5 | 47.2 | " | 9.4 |
| 141 | Kamalakhya Sbar | Bangaj Kayastha | " | " | 23 | 161.5 | 69.7 | 17.2 | 7.6 | 44.2 | Land Holder | 8.4 |
| 142 | Pulin Ch. Das | Risbi Muebi | " | " | 28 | 169.4 | 81.2 | 17.7 | 7.8 | 44.1 | Merchant | 9.7 |
| 143 | Kalikanta Biswas | Varendra Brahmin | " | " | 58 | 174.7 | 80.8 | 18.0 | 7.8 | 44.4 | Pensioner | 9.9 |
| 144 | Suresndra Chawdhury | " | " | " | 38 | 157.9 | 69.9 | 15.9 | 7.2 | 45.3 | Land Holder | 8.4 |
| 145 | Jogindra Sarkar | Varendra Kayastha | " | " | 44 | 163.5 | 73.9 | 17.0 | 8.3 | 48.8 | Merchant | 9.9 |
| 146 | Amulyachan Kunon | Bighora Tili | " | " | 24 | 173.1 | 79.7 | 17.7 | 7.7 | 43.5 | Teacher | 10.0 |
| 147 | Bhabatos Mukherjee | R. Brahmin | " | Tangail | 26 | 162.0 | 70.2 | 17.5 | 8.2 | 46.9 | " | 9.7 |
| 148 | Kalachand Goswami | Rabri-Brahmin | " | Manik Gauj | 23 | 166.9 | 70.7 | 17.7 | 8.0 | 41.9 | Student | 8.7 |
| 149 | Kshina Ch. Mazumdar | Vaidya | " | Dacca | 42 | 169.7 | 79.6 | 16.6 | 8.0 | 44.1 | Merchant | 10.1 |

| Serial No. | Name. | Caste. | Religion. | District. | Age. | Stature. | Arm Length. | Hand Length. | Hand Length. | Hand Index. | Profession. | Middle Finger Length. |
|------------|-----------------------|-----------------|-----------|------------|------|----------|-------------|--------------|--------------|-------------|---------------|-----------------------|
| 150 | Haren Ganguli | R. Brahmin | Hinduism | Dacca | 25 | 171.6 | 83.4 | 15.4 | 8.2 | 53.3 | Social Worker | 10.4 |
| 151 | Arun Ch. Roy | Vaidya | " | " | 33 | 168.3 | 75.7 | 18.0 | 7.6 | 42.2 | Lawyer | 10.3 |
| 152 | Jitendra Bose | Bangaj Kayastha | " | " | 35 | 179.2 | 80.5 | 17.2 | 7.6 | 44.2 | Doctor | 9.8 |
| 153 | Hemendra Guba Roy | " | " | Comilla | 30 | 177.3 | 77.9 | 17.8 | 7.8 | 43.8 | Business | 9.3 |
| 154 | Pratap Das | " | " | Tangail | 23 | 163.3 | 73.6 | 17.5 | 7.8 | 44.6 | Student | 8.4 |
| 155 | Ramesh Ch Chowdhury | R. Brahmin | " | Netrokona | 32 | 173.4 | 77.1 | 19.3 | 8.5 | 44.0 | " | 9.9 |
| 156 | Nagen Das | Bangaj Kayastha | " | Dewli | 24 | 168.2 | 74.5 | 18.0 | 8.2 | 45.6 | Land-holder | 10.1 |
| 157 | Rinde Ch. Chakrabarty | R. Brahmin | " | Mymensingh | 30 | 136.9 | 75.5 | 16.1 | 8.1 | 50.3 | " | 8.6 |
| 158 | Mahes Ch. Modak | Garos | Tribal | " | 25 | 161.5 | 71.4 | 16.0 | 7.8 | 48.8 | Cultivator | 9.6 |
| 159 | Kalachand Hajun | Hajang | Hinduism | " | 32 | 161.5 | 75.7 | 17.7 | 8.0 | 45.2 | " | 8.9 |
| 160 | Achul Hakim | Moslems | Islam | " | 23 | 159.0 | 73.6 | 16.6 | 7.3 | 44.0 | Land-holder | 8.6 |
| 161 | Manindra Sinha | D. R. Kayastha | Hinduism | Rangpur | 37 | 169.9 | 77.7 | 17.4 | 8.1 | 46.6 | " | 9.9 |
| 162 | Surendra Das Gupta | Vaidya | " | Dacca | 37 | 170.0 | 79.0 | 16.7 | 8.0 | 47.9 | Teacher | 9.3 |
| 163 | Hararath Banerjee | R. Brahmin | " | Kulna | 35 | 165.4 | 77.8 | 18.8 | 8.0 | 42.6 | Student | 9.7 |
| 164 | Bishnudas Chatterjee | " | " | Calcutta | 59 | 168.1 | 75.1 | 17.4 | 8.4 | 48.3 | Land-holder | 9.3 |
| 165 | Biren Palit | " | " | Hoogly | 32 | 162.7 | 68.0 | 17.0 | 7.8 | 45.9 | Student | 8.9 |
| 166 | Baidya N. Das | Suri | " | Calcutta | 23 | 160.1 | 71.7 | 13.3 | 7.1 | 43.6 | " | 9.3 |
| 167 | Provat Sen | D. R. Kayastha | " | " | 23 | 175.2 | 76.5 | 17.6 | 7.4 | 42.1 | Service | 9.6 |
| 168 | Sambhu Ghosal | R. Brahmin | " | " | 24 | 163.6 | 73.4 | 16.7 | 7.6 | 45.6 | " | 9.2 |
| 169 | Sunil Ghose | D. R. Kayastha | " | " | 25 | 174.1 | 74.4 | 18.5 | 8.0 | 43.9 | Student | 9.1 |
| 170 | Sarat Mondal | Don. | " | " | 33 | 158.3 | 69.0 | 16.6 | 8.0 | 48.2 | Basket-maker | 9.2 |
| 171 | Susan Chandra Petra | " | " | " | 27 | 163.4 | 70.7 | 16.0 | 7.8 | 48.8 | " | 8.8 |
| 172 | Bhuben Pakro | " | " | " | 23 | 156.6 | 66.1 | 14.9 | 7.2 | 50.3 | " | 8.5 |
| 173 | Amiya Ghose | D. R. Kayastha | " | " | 32 | 167.0 | 84.2 | 17.3 | 8.0 | 46.5 | Business | 9.7 |

| Serial No. | Name. | Caste. | Religion. | District. | Age. | Stature. | Arm Length. | Hand Length. | Hand Breadth. | Hand Index. | Profession. | Middle Finger Length. |
|------------|--------------------|----------------|-----------|-------------|------|----------|-------------|--------------|---------------|-------------|-------------|-----------------------|
| 174 | Nitmani Ghose | D. K. Kayastha | Hinduism | Calcutta | 56 | 166 | 875.7 | 17.7 | 8.0 | 45.2 | Business | 9.3 |
| 175 | Beni Das | Malishya | " | Midnapur | 35 | 163 | 872.9 | 17.0 | 7.7 | 45.8 | Labourer | 9.4 |
| 176 | Sombhu Mondal | " | " | 24 Parganas | 27 | 166 | 475.2 | 16.8 | 7.7 | 45.8 | " | 10.1 |
| 177 | Saurendra Palit | D. R. Kayastha | " | Hoogly | 22 | 170 | 477.6 | 17.3 | 8.3 | 48.0 | Student | 9.6 |
| 178 | Hiralal Mitra | " | " | Midnapur | 39 | 159 | 938.7 | 19.5 | 7.5 | 38.5 | Business | 8.5 |
| 179 | Harendra Palit | " | " | Hoogly | 25 | 171 | 477.9 | 17.6 | 8.6 | 48.9 | Student | 9.7 |
| 180 | Debendra Mitra | " | " | Midnapore | 43 | 155 | 569.8 | 16.6 | 7.5 | 45.2 | Business | 9.0 |
| 181 | Harendra Sarkar | " | " | Calcutta | 31 | 168 | 878.1 | 17.6 | 7.7 | 43.8 | " | 9.7 |
| 182 | Kalidas Mookerjee | R. Brahm | " | 24 Parganas | 22 | 163 | 270.2 | 17.2 | 7.4 | 43.0 | Student | 9.2 |
| 183 | Madan M. De | Subarna Banik | " | Calcutta | 22 | 167 | 074.7 | 17.2 | 7.6 | 44.2 | Artist | 9.8 |
| 184 | Sudhir K. Banerjee | R. Brahm | " | " | 27 | 168 | 177.7 | 17.2 | 7.7 | 44.8 | Business | 9.0 |
| 185 | Kanai Pramanik | Suri | " | Nadia | 22 | 168 | 173.2 | 16.7 | 7.6 | 44.9 | Painter | 9.1 |
| 186 | Kishari Pramanik | Suri | " | " | 23 | 167 | 777.5 | 17.5 | 7.7 | 44.0 | Artist | 9.8 |
| 187 | Lalit K. Ghose | D. R. Kayastha | " | Midnapore | 33 | 155 | 368.7 | 15.3 | 7.7 | 50.3 | Teacher | 8.9 |
| 188 | Mahes Ch. Banerjee | R. Brahm | " | Khulna | 40 | 168 | 976.8 | 16.4 | 7.5 | 45.7 | Business | 9.0 |
| 189 | Nalini Chakravarty | " | " | Tippore | 38 | 173 | 272.0 | 16.9 | 7.9 | 47.3 | Student | 8.8 |
| 190 | Minaboy Pramanik. | Suri | " | Nadia | 29 | 171 | 481.2 | 18.0 | 7.2 | 40.0 | Artist | 9.9 |

Means.

| | N. | Stature. | S.E. | Arm Length S. R. | Hand Length. |
|----------------------------------|-----|-----------------------|------|----------------------|----------------------|
| 1. Caste Hindus | 124 | 165.5908 \pm 0.5512 | | 74.8814 \pm 0.4224 | 17.4266 \pm 0.0882 |
| 2. Depressed class | ■ | 161.7281 " 0.9493 | | 73.6594 " 0.6767 | 16.9312 " 0.1672 |
| 3. Muhammádians | 20 | 161.9200 " 1.0201 | | 75.3950 " 0.9955 | 16.6650 " 0.1561 |
| 4. Aborigines | 14 | 160.1643 " 1.3855 | | 73.4071 " 1.0896 | 17.4148 " 0.2397 |
| 5. All Castes | 190 | 164.1537 " 0.4433 | | 74.6474 " 4.3394 | 17.1253 " 0.0754 |
| 6. Manual class | 67 | 161.7090 " 0.6524 | | 73.6791 " 0.6475 | 17.1567 " 0.1390 |
| 7. Non-Manual class | 123 | 165.4364 " 0.5653 | | 75.0903 " 0.3667 | 17.1081 " 0.0887 |
| 8. Caste-Hindu Manual | 30 | 162.9650 " 1.4083 | | 73.5900 " 1.5550 | 17.4100 " 0.3394 |
| 9. Caste-Hindus Non-Manual class | 104 | 166.0852 " 0.6848 | | 75.1298 " 0.4004 | 17.1913 " 0.0969 |
| 10. Depressed-class Manual | 24 | 161.1958 " 0.9834 | | 73.9293 " 0.7373 | 16.8792 " 0.1982 |
| 11. Depressed-class Non-Manual | 8 | 163.3250 " 2.2733 | | 75.8600 " 1.3714 | 17.0876 " 0.3966 |
| 12. Muhammádian Manual | 10 | 162.4800 " 1.2693 | | 77.4600 " 1.5995 | 17.0100 " 0.2008 |
| 13. Muhammádian Non-Manual | 10 | 162.3600 " 1.6545 | | 73.3400 " 0.7741 | 16.2000 " 0.1703 |

| | N. | Hand Breadth S. E. | Hand Index | S. E. | N. | Middle Finger-length. |
|---------------------------------|-----|---------------------|---------------|--------|-----|-----------------------|
| 1. Caste Hindus | 124 | 7.9000 \pm 0.0395 | 45.9903 \pm | 0.2481 | 23 | 9.35 \pm 0.0652 |
| 2. Depressed class | 32 | 7.8135 „ 0.0584 | 46.3406 „ | 5784 | 17 | 9.25 „ .1233 |
| 3. Muhammadans | 20 | 7.8050 „ 0.0384 | 47.0500 „ | 5796 | 18 | 9.24 „ .1080 |
| 4. Aborigines | 14 | 7.9286 „ 0.0716 | 45.5929 „ | 4944 | 1 | 8.6 |
| 5. All Caste | 190 | 7.8774 „ 0.0302 | 46.1316 „ | 2033 | 109 | 9.31 „ .0516 |
| 6. Manual class | 67 | 7.9080 „ 0.0374 | 46.2597 „ | 3224 | 67 | |
| 7. Non-Manual class | 123 | 7.8618 „ 0.0421 | 46.0618 „ | 2602 | 133 | |
| 8. Caste-Hindu Manual | 20 | 7.9000 „ 0.0784 | 45.6850 „ | 5785 | 3 | 9.80 „ .2771 |
| 9. Caste-Hindu Non-Manual class | 104 | 7.9000 „ 0.0450 | 46.0490 „ | 2739 | 70 | 9.70 „ .0664 |
| 10. Depressed-Castes Manual | 24 | 7.9208 „ 0.0647 | 47.0917 „ | 6264 | 9 | 9.13 „ .2043 |
| 11. Depressed-castes Non-Manual | 8 | 7.4875 „ 0.0909 | 44.0875 „ | 9436 | 8 | 9.37 „ .1091 |
| 12. Muhammadan Manual | 10 | 7.8800 „ 0.0971 | 46.3700 „ | 0.6005 | 9 | 9.42 „ 0.1613 |
| 13. Muhammadan Non-Manual | 10 | 7.7300 „ 0.1746 | 47.7300 „ | 0.9781 | 9 | 9.06 „ 0.1323 |

Standard Deviation (S. D.) and its Standard Error :

| | N. | Stature. | Arm Length. | Hand Length. |
|----------------------------|-----|--------------------|--------------------|--------------------|
| 1. Caste Hindus | 134 | 5.138 \pm 0.3898 | 4.704 \pm 0.2987 | 1.094 \pm 0.0695 |
| 2. Depressed Class | 32 | 5.370 " 0.6712 | 3.828 " 0.4785 | 0.948 " 0.1182 |
| 3. All Castes | 190 | 6.110 " 0.3184 | 4.540 " 0.2329 | 1.040 " 0.0534 |
| 4. Muhamadana | 20 | 4.562 " 0.7213 | 4.452 " 0.7039 | 0.898 " 0.1104 |
| 5. Aborigines | 14 | 5.184 " 0.9797 | 4.002 " 0.7563 | 0.897 " 0.1895 |
| 6. Manual Labourer Class | 67 | 5.340 " 0.4613 | 5.300 " 0.4579 | 1.138 " 0.0983 |
| 7. Non-Manual Class | 123 | 6.491 " 0.4139 | 4.066 " 0.2593 | 0.983 " 0.0827 |
| 8. Caste Hindu Manual | 20 | 6.298 " 0.8958 | 6.464 " 1.5550 | 1.518 " 0.3594 |
| 9. Caste Hindu Non-Manual | 101 | 5.964 " 0.4135 | 4.084 " 0.4004 | 0.986 " 0.0989 |
| 10. Depressed Class Manual | 24 | 4.818 " 0.6954 | 3.613 " 0.7373 | 0.971 " 0.1982 |
| 11. " " Non-Manual | 8 | 6.430 " 1.6075 | 3.596 " 1.2714 | 0.839 " 0.2266 |
| 12. Muhamadana Manual | 10 | 4.011 " 0.8969 | 5.058 " 1.1310 | 0.636 " 0.1419 |
| 13. " " Non-Manual | 10 | 5.232 " 1.1639 | 2.445 " 0.5467 | 0.540 " 0.1207 |

| | N. | Hand Breadth. | Hand Index. | N. | Middle Finger Length. |
|----------------------------|-----|----------------|----------------|-----|-----------------------|
| 1. Caste Hindu | 124 | 0.444 ± 0.0279 | 2.763 ± 0.1754 | 73 | 0.567 ± 0.0461 |
| 2. Depressed Class | 32 | 0.359 „ 0.0449 | 3.272 „ 0.4090 | 17 | 0.509 „ 0.0872 |
| 3. All Castes | 190 | 0.417 „ 0.0214 | 2.802 „ 0.1437 | 109 | 0.539 „ 0.0365 |
| 4. Muhammadans | 20 | 0.444 „ 0.0696 | 2.592 „ 0.4098 | 18 | 0.458 „ 0.0784 |
| 5. Aborigines | 14 | 0.268 „ 0.0506 | 1.850 „ 0.3496 | | |
| 6. Manual Labourer Class | 67 | 0.306 „ 0.0264 | 26.39 „ 0.2280 | | |
| 7. Non-Manual Class | 123 | 0.467 „ 0.0298 | 28.86 „ 0.1840 | | |
| 8. Caste Hindu Manual | 20 | 0.329 „ 0.0734 | 2.791 „ 0.2737 | 9 | 0.411 „ 0.2371 |
| 9. Caste Hindu Non-Manual | 104 | 0.459 „ 0.0450 | 2.587 „ 0.5785 | 70 | 0.556 „ 0.0654 |
| 10. Depressed Class Manual | 24 | 0.317 „ 0.0647 | 3.059 „ 0.6214 | 9 | 0.613 „ 0.2043 |
| 11. „ Non-Manual | 8 | 0.257 „ 0.0900 | 2.669 „ 0.9436 | 8 | 0.309 „ 0.1091 |
| 12. Muhammadan Manual | 10 | 0.307 „ 0.0686 | 1.899 „ 0.4246 | 9 | 0.484 „ 0.1082 |
| 13. „ Non-Manual | 10 | 0.552 „ 0.1234 | 3.093 „ 0.6916 | 9 | 0.397 „ 0.0887 |

Co-efficient of Variation (V).

| | | N. | Stature. | Arm Length. | Hand Length. | Hand Breadth. | Hand Index. |
|-----|-----------------------|-----|---------------------|---------------------|---------------------|---------------------|---------------------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| 1 | Caste Hindus | 124 | 3.7667 \pm 0.2356 | 6.2819 \pm 0.4001 | 6.3508 \pm 0.4046 | 5.5696 \pm 0.3545 | 6.0078 \pm 0.3827 |
| 2 | Depressed Class | 32 | 3.3204 " | 5.1969 " | 5.5873 " | 4.5952 " | 7.0608 " |
| 3 | All Castes | 190 | 3.7221 " | 6.0901 " | 6.0729 " | 5.3936 " | 6.0739 " |
| 4 | Muhammudans | 20 | 2.8174 " | 5.9049 " | 4.2036 " | 5.6874 " | 5.5090 " |
| 5 | Aboriginals | 14 | 3.2367 " | 5.5271 " | 5.1509 " | 3.3602 " | 4.0576 " |
| 6 | Manual Labourer Class | 67 | 3.3022 " | 7.1934 " | 6.6330 " | 3.8705 " | 5.7047 " |
| 7 | Non-Manual Class | 123 | 3.9224 " | 5.4204 " | 5.7470 " | 5.9401 " | 6.2681 " |

Coefficient of Correlation (r) and its Standard Error.

| | | N. | Stature x Arm Length. | Stature x Hand Length. | Stature x Hand Breadth. | Stature x Hand Index. |
|-----|-----------------------|-----|------------------------------|-------------------------------|-----------------------------|--------------------------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| 1 | Caste Hindus | 124 | 0.3873 ± 0.0828 | 0.26970 ± 0.0867 | 0.1298 ± 0.0890 | -0.1891 ± 0.0863 |
| 2 | Depressed Class | 32 | 0.7095 " 0.1246 | 0.4802 " 0.1551 | 0.3170 " 0.1674 | -0.2680 " 0.1703 |
| 3 | All Castes | 190 | 0.4787 " 0.0639 | 0.3161 " 0.0698 | 0.1702 " 0.0711 | -0.1879 " 0.0712 |
| 4 | Manual Labourer Class | 67 | 0.4783 " 0.1070 | 0.2069 " 0.1195 | 0.2247 " 0.1196 | -0.0909 " 0.1217 |
| 5 | Non-Manual Class | 123 | 0.4896 " 0.0799 | 0.3789 " 0.0848 | 0.1532 " 0.0907 | -0.3025 " 0.0874 |
| | | | | | | |
| | | (N) | Arm Length x Hand Length. | Arm Length x Hand Breadth. | Arm Length x Hand Index. | |
| | | | (8) | (9) | (10) | |
| 1 | Caste Hindus | 124 | 0.2221 ± 0.0876 | 0.1318 ± 0.0883 | -0.0500 ± 0.0897 | |
| 2 | Depressed Class | 24 | 0.5809 " 0.1439 | 0.1480 " 0.1729 | -0.3420 " 0.1661 | |
| 3 | All Castes | 190 | 0.3107 " 0.0689 | 0.1945 " 0.0698 | -0.1235 " 0.0719 | |
| 4 | Manual-Labourer Class | 67 | 0.2397 " 0.1185 | 0.2626 " 0.1137 | -0.1210 " 0.1213 | |
| 5 | Non Manual Class | 123 | 0.3699 " 0.0832 | 0.1930 " 0.0868 | -0.1283 " 0.0909 | |

Caste Hindus.

| | Brahmin | Chatri | Gandha-Banik | Kayastha | Mahiya | Modak | Moyra | Napit | Sadgap | Subarna-Banik | Tamuli | Teli | Vaidya | Tantulaya | Total. |
|-----------------|---------|--------|--------------|----------|--------|-------|-------|-------|--------|---------------|--------|------|--------|-----------|--------|
| Manual Labourer | 2 | 2 | 3 | 5 | 2 | 1 | - | 1 | - | 2 | 1 | - | 1 | - | 24 |
| Non-Manual | 36 | 3 | 23 | 39 | 2 | 1 | 1 | 1 | 1 | 4 | - | 5 | 8 | 1 | 104 |
| Total. | 38 | 5 | 54 | 44 | 4 | 2 | 1 | 2 | 1 | 6 | 1 | 5 | 9 | 1 | 124 |

Depressed Class.

| | Bagdi | Beuri | Bedia | Bhuiya | Dom | Hajang | Kabi | Khoira | Muchi | Nama-Sudra | Pajak (Dhobi) | Pajbanshi (Koch) | Sutradhar | Suri | Total. |
|-----------------|-------|-------|-------|--------|-----|--------|------|--------|-------|------------|---------------|------------------|-----------|------|--------|
| Manual Labourer | 1 | 8 | 2 | 1 | 3 | 1 | 1 | 1 | - | 1 | 1 | 4 | - | - | 24 |
| Non-Manual | . | . | . | . | . | . | . | . | 1 | . | . | 2 | 1 | 1 | 8 |
| Total. | 1 | 8 | 2 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | 6 | 1 | 32 |

| | Caste Hindus | Depressed Class | Muham- madians | Aborigi- nal | Total. |
|-----------------|-----------------|--------------------|-------------------|-----------------|--------|
| Manual Labourer | 20 | 24 | 10 | 13 | 67 |
| Non-Manual | 104 | ■ | 10 | 1 | 123 |
| Total. | 124 | 32 | 20 | 14 | 190 |

Aboriginals.

| | Santal | Kora | Bhumij | Garó | Total. |
|-----------------|--------|------|--------|------|--------|
| Manual Labourer | 10 | 2 | — | 1 | 13 |
| Non-Manual | . | . | 1 | . | 1 |
| Total. | 10 | 2 | 1 | 1 | 14 |

Differences of Means 37 of amongst the Hindus of different* class.

Stature.

| | Non-Manual | Manual | Mean | Difference |
|-----------------|------------|----------------|----------|---------------------|
| Caste Hindus | 166.0952 | 162.2650 | 164.5301 | 2.2697 \pm 1.4544 |
| Depressed class | 163.3260 | 161.1958 | 162.2604 | |
| Mean | 164.7101 | 162.0804 | | |
| Difference | 2.6297 | \pm 1.454300 | | |

Arm Length.

| | | | | |
|-----------------|---------|----------------|---------|---------------------|
| Caste Hindus | 75.1288 | 73.5900 | 74.3599 | 0.0297 \pm 1.0885 |
| Depressed class | 75.8500 | 72.9292 | 74.3896 | |
| Mean | 75.4899 | 73.2596 | | |
| Difference | *2.2803 | \pm 1.088500 | | |

| <i>Hand Length.</i> | Non-Manual | Manual | Mean | Difference |
|----------------------------|------------|---------------|---------|----------------------|
| Caste Hindus | 17.1913 | 17.4100 | 17.3007 | 0.3173 \pm 0.2509 |
| Depressed-Hindus-castes | 17.0875 | 18.8792 | 16.9834 | |
| Mean | 17.1394 | 17.1446 | | |
| Difference | 0.0083 | \pm 0.25140 | | |
| <i>Hand Breadth.</i> | | | | |
| Caste Hindus | 7.9000 | 7.9000 | 7.9000 | *0.1959 \pm 0.0704 |
| Depressed class | 7.4875 | 7.9308 | 77.000 | |
| Mean | 7.6938 | 7.9104 | | |
| Difference | * - 0.2166 | \pm 0.0744 | | |
| <i>Hand Index.</i> | | | | |
| Caste Hindus | 46.0490 | 46.6850 | 45.8670 | 0.2774 \pm 0.6500 |
| Depressed class | 44.0875 | 47.0917 | 45.5896 | |
| Mean | 45.0683 | 46.3884 | | |
| Difference | * - 1.3201 | \pm 0.6501 | | |
| <i>Hand finger length.</i> | | | | |
| Caste Hindus | 9.7051 | 9.8000 | 9.7526 | *0.4984 \pm 0.1690 |
| Depressed class | 9.3750 | 9.1333 | 9.2543 | |
| Mean | 9.5400 | 9.4687 | | |
| Difference | 0.0733 | \pm 0.1600 | | |

Calculation of mean of two groups*

To find the over-all mean of two groups of unlimited size, we may take two samples of equal size from the two groups and calculate one mean by treating the entire sample as one. If however, the two samples are of unequal size, the unbiased estimate is obtained by taking the mean of the two individual means and not the overall mean, obtained by taking the two samples as one.

Thus if the two groups have sizes n_1 and n_2 and means m_1 and m_2 the unbiased means $\frac{m_1 + m_2}{2}$ and not

$$\frac{n_1 m_1 + n_2 m_2}{n_1 + n_2}$$

*Vide A. L. Bowley—"Measurement of precision attained in sawfiling."

Memorandum published by the International statistical Institute. Bulletin International statistical Institute vol. 22 fere Livre.

Differences of Means (Caste Hindus and Mohammedans).

| Stature | Non-Manual | Manual | Mean | Difference |
|--------------|--------------|--------------|----------|----------------------|
| Caste Hindus | 166.0952 | 162.9650 | 164.5301 | 2.6101 \pm 1.2916* |
| Muhammedans | 161.3800 | 162.4800 | 161.9200 | |
| Mean | 163.7376 | 162.7225 | | |
| Difference | ± 1.0051 | ± 1.2916 | | |
| Arm Length | | | | |
| Caste Hindus | 75.1298 | 73.5900 | 74.3599 | 1.0351 \pm 1.1975 |
| Muhammedans | 73.3400 | 77.4500 | 75.3950 | |
| Mean | 74.2349 | 75.5200 | | |
| Difference | ± 1.2851 | ± 1.1975 | | |
| Hand Length | | | | |
| Caste Hindus | 17.1913 | 17.4100 | 17.3007 | 0.6957 \pm 0.2203* |
| Muhammedans | 16.2000 | 17.0100 | 16.6050 | |
| Mean | 16.6957 | 17.2100 | | |
| Difference | ± 0.5143 | ± 0.2203 | | |

| <i>Hand Breadth</i> | Non-Manual | Manual | Mean | Difference |
|------------------------------|------------|--------------|---------|---------------------|
| Caste Hindus | 79007 | 79000 | 79000 | 0.0950 ± 0.4422 |
| Muhammedans | 77300 | 78800 | 78050 | |
| Mean | 78150 | 78900 | | |
| Difference | -0.0750 | ± 0.1088 | | |
| <i>Hand Index</i> | | | | |
| Caste Hindus | 46.0490 | 46.6850 | 46.8670 | 1.2830 ± 0.6571 |
| Muhammedans | 47.7300 | 46.3700 | 47.0500 | |
| Mean | 46.8896 | 46.0275 | | |
| Difference | +0.8820 | ± 0.6571 | | |
| <i>Middle Finger Length*</i> | | | | |
| Caste Hindus | 9.7000 | 9.8000 | 9.7500 | 0.5100 ± 0.1858 |
| Muhammedans | 9.0600 | 9.4200 | 9.2400 | |
| Mean | 9.3800 | 9.6100 | | |
| Difference | -0.2300 | ± 0.1614 | | |

Differences of Means (Depressed Castes + Muhammedans).

| <i>Stature.</i> | Non-Manual | Manual | Mean | Difference |
|--------------------|------------|------------|------------|------------------|
| Caste Hindus | 163.3250 | 161.1958 | = 162.2604 | +0.3404 ± 1.6188 |
| Muhammedans | 161.3600 | 162.4800 | " 161.9200 | |
| Mean | = 162.3425 | = 161.8379 | | |
| Difference | +0.5046 | + 1.6188 | | |
| <i>Arm Length</i> | | | | |
| Caste Hindus | 75.8500 | 75.9392 | 74.5896 | -1.0054 ± 1.1530 |
| Muhammedans | 73.3400 | 77.4500 | 75.3950 | |
| Mean | 74.5950 | 75.1896 | | |
| Difference | -0.5946 | +1.1682 | | |
| <i>Hand Length</i> | | | | |
| Caste Hindus | 17.0875 | 16.8792 | 16.9884 | +0.3784 ± 0.2217 |
| Muhammedans | 16.2000 | 17.0100 | 16.6050 | |
| Mean | 16.6438 | 16.9446 | | |
| Difference | -0.3091 | +0.2217 | | |

| <i>Hand Breadth</i> | Non-Manual | Manual | Mean | Difference |
|-----------------------------|------------|----------|---------|------------------|
| Depressed Castes | 7.4875 | 7.9808 | 7.7042 | -0.1008 ± 0.1144 |
| Muhammadans | 7.7300 | 7.8800 | 7.8050 | |
| Mean | 7.6088 | 7.9004 | | |
| Difference | -0.2916 | ± 0.2916 | | |
| <i>Hand Index</i> | | | | |
| Depressed Castes | 44.0875 | 47.0917 | 45.5896 | -1.4604 ± 0.8038 |
| Muhammadan | 47.7300 | 46.3700 | 47.0500 | |
| Mean | 45.9088 | 46.7309 | | |
| Difference | -0.8221 | ± 0.8058 | | |
| <i>Middle Finger Length</i> | | | | |
| Depressed Castes | 9.3700 | 9.1300 | 9.2500 | +0.0100 ± 0.1688 |
| Muhammadans | 9.0800 | 9.4200 | 9.2400 | |
| Mean | 9.2150 | 9.2750 | | |
| Difference | -0.0600 | ± 0.1559 | | |

Differences of means (Manual and Non-Manual classes)§

| | | |
|---|--------------|------------------------|
| 1 | Stature | $-3.7764 \pm 0.8760^*$ |
| 2 | Arm-length | „ 1.3412 „ 0.7440 |
| 3 | Hand-length | +0.0486 „ 0.1650 |
| 4 | Hand-breadth | „ 0.1979 „ 0.4140 |
| 5 | Hand-index | „ 0.0442 „ 0.0570 |

§Here, the usual formula is applied, viz ;

$$e_{a-b} = \sqrt{e_a^2 + e_b^2}$$

Vide L.H.C. Tippett : "*The Methods of Statistics*"

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Somatic ratio expressed in percentage. (In relation with Stature.)

| | % Relative Arm Length. | % Relative Hand Length. | % Relative Middle finger Length. | % Ratio of Hand Breadth and Hand Length. | % Ratio of Hand Breadth and Arm Length. | % Ratio of Hand Length and Arm Length. |
|---------------------|------------------------|-------------------------|----------------------------------|--|---|--|
| 1. All-Castes | 45.45 | 10.43 | 5.67 | 46.08 | 10.57 | 22.99 |
| 2. Caste Hindu | 45.25 | 10.40 | 5.76 | 45.87 | 10.55 | 22.99 |
| 3. Depressed Class | 45.46 | 10.47 | 5.72 | 46.08 | 10.60 | 22.99 |
| 4. Muhamadans | 45.51 | 10.26 | 5.71 | 46.96 | 10.35 | 22.08 |
| 5. Aborigines | 45.25 | 10.87 | | 45.45 | 10.85 | 22.04 |
| 6. Manual Class | 45.66 | 10.62 | | 46.08 | 10.73 | 22.31 |
| 7. Non-Manual Class | 45.45 | 10.34 | | 45.87 | 10.48 | 22.73 |

Proportion.

| | Stature-Arm Length. | Stature-Hand Length. | Stature-Middle finger Length. | Arm Length-Hand Length. | Arm Length-Hand-Breadth. | Hand Length-Hand-Breadth. |
|---------------------|---------------------|----------------------|-------------------------------|-------------------------|--------------------------|---------------------------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| 1. All-Castes | 2.2030 | 9.5855 | 17.43 | 4.3531 | 9.4634 | 2.1740 |
| 2. Caste Hindus | 2.2114 | 9.6125 | 17.73 | 4.3468 | 9.4787 | 2.1806 |
| 3. Depressed Class | 2.1926 | 9.5521 | 17.48 | 4.3505 | 9.4284 | 2.1672 |
| 4. Muhamadans | 2.1476 | 9.7513 | 17.52 | 4.5405 | 9.6598 | 2.1275 |
| 5. Aborigines | 2.2120 | 9.1973 | | 4.4179 | 9.1324 | 2.1964 |
| 6. Manual Class | 2.1948 | 9.4254 | | 4.2945 | 9.3194 | 2.1701 |
| 7. Non-Manual Class | 2.2059 | 9.6729 | | 4.3651 | 9.5424 | 2.1761 |

ANTHROPOLOGICAL NOTES AND NEWS.

At the Twenty-sixth annual session of the Indian Science Congress held at Lahore in the first week of January, 1939, a number of papers were read in the Section of Anthropology. Abstracts of those papers are given below :—

Ethnology.

1. *Racial affinities of the Hindu population of Orissa*, A. K. MITRA and B. K. CHATTERJI.

In this paper the authors analyze the anthropometric data on the Brahmanas of Orissa and observation on their integumental characters taken by Dr. B. S. Guha, and compare them with Risley's data on other Orissan castes. Comparison is also made with the Brahmanas of Bihar, and conclusions drawn regarding the racial strains present in the Hindu population of Orissa.

2. *Substratum of Mediterranean element among the tribes of Sind and Baluchistan*, C. R. ROY.

Analysis of the anthropometric measurement of 100 Brahuis and 100 Sindhis. Nearly equal percentage of Irano-Mediterranean and Indo-Iranian elements are found among both. The basis of the Brahuis is Mediterranean which has been modified by Indo-Afghan on one hand and by Homo-Alpinus or Pamiri stock on the other hand. The basis of the Sindhis is also Mediterranean which has been modified by a strong Homo-Alpinus stock.

3. *A plea for the reconsideration of the anatomical landmarks in craniometry*, R. N. BASU.

Some of the anatomical landmarks as prescribed by the Monaco Agreement are discussed. The difficulties in their location in some skulls are mentioned. The difficulties experienced in connection with some of the craniometrical measurements are also discussed.

4. *Determination of the Nasion in the living*, K. P. CHATTOPADHAY.

In this paper the author discusses the methods followed by previous workers in fixing this point. He criticizes certain recent suggestions in the light of measurements taken by him.

5. *Studies on the hand-form of the Bengalis*, P. C. BISWAS.

The following study is based upon the investigations of 140 Bengali male hands (70 right and 70 left hands). For this study the following measurements are taken :—

- (1) Length of the hand—length taken from the middle point of the line joining the styliion radiale to styliion ulnar to the Dactyliion point.
- (2) Breadths of the hand are taken in three different places :—
 - (a) breadth from Metacarpale radiale to Metacarpale ulnar ;
 - (b) breadth from Proxindicion to Ulnocquartion ;
 - (c) breadth from Distindicion to Ulnocquartion.

The characteristics of the hand-form is determined from a number of indices. The hand-form of the Bengalis is compared with that of the Swedish and Issa-Somali.

6. *The Pterion in Indian human crania*, R. N. BASU and M. N. BASU.

A few skulls collected in Bengal, the diaphographing tracing were taken in all the skulls of the Pterion regions—the results tabulated and compared with other published results.

Ethnography.

7. *Indian Basketry—their texture and design*, B. S. GUHA.

A comparative study of the texture and designs of Indian Basketry based on the specimens in the collection of the Indian Museum is made in this paper.

8. *The Vaghers of Okhamandal*, S. T. MOSES.

The traditional origin of the Vaghers (a) from the sweat of God, (b) from the hole where Kashesura was destroyed, and (c) from the sweat of Krishna, to punish Arjuna. Really they are the aboriginal Kshatryas with a mixture of Rajput blood. The name Vagher and its derivations : (a) uncomplimentary name because of tiger-like characteristics, and (b) cooled a God when on a visit to hot Okha and so got the name. Occupations—Fishing, pear-fishing, piracy and outlawry, agriculture and as coolies, cartmen and guides—Salami tenure in Agriculture—Water-divining and posthumous children—Their food, drink, etc.—

Dress—Games and entertainments—Speech—Religion—Marriage, divorce, etc.—Characteristics—Cranial and nasal measurements.

9. *Some Aspects of the Material Economy of Transgiri People*, Y. S. PARMAR.

The Transgiri territory lies in the small hill State, called Sirmur, very often known as Nahan because of the capital. The State of Sirmur lies among the outer Himalayan ranges between $77^{\circ} 5'$ and $77^{\circ} 55'E.$ and $90^{\circ} 20'$ and $31^{\circ} 5'N.$ It is bounded — the north by the Simla hill State of Balsan and Jubbil, on the east by the Tons river, which divides it from the Dehradun District of U.P. from which the Jumna also separates on the south-east, on the south by the borders of the State of Kalsia and the Ambala District of the Punjab. It is bounded on the west by Patiala territory and on the north by Keonthal.

A detailed description of the occupations of the people of this area, their general economic conditions, the state of communications and the interdependence of the various cultural groups is given. Ethnographic details about dress, decoration, ornaments, utensils, weapons, agriculture implements, fishing traps and nets, musical instruments, etc. are provided. The influence of cultural contacts on domestic and agrarian economy is illustrated.

10. *Marital life in the Transgiri Tract*, Y. S. PARMAR.

The author gives a general account of the social life of the Transgiri people. He describes

their different types of marriage, viz., *Phera*, *Jhajra* and *Reet*. The common form of marriage is *Jhajra* which is now being replaced by *Phera*. In Kullu *Jhajra* has come to indicate widow remarriage, but in the Transgiri tract it is the regular form of marriage. *Reet* is a form of marriage, without any ceremony whatsoever, contracted by paying a money price (varying according to the beauty of the girl, generally from Rs.100 to Rs.500 and in many cases goes to four figures even) to the guardian of the girl if she is unmarried or to the husband of that girl if married. There is no limit to *Reet* marriages which can be as easily dissolved as they are freely resorted to. The influence of *Reet* on the life of the inhabitants, not only of this tract but of other neighbouring hills has been estimated. It has deprived men of their morals and women of their chastity. It has adversely affected their economic life inasmuch as the people are incurring debts because of it. It has been responsible for quarrels and bitterness within the village and feuds between neighbouring villages. It has also resulted in the disintegration of family life and has led to instability of family life and of family organization. The various measures taken to eradicate the evils of *Reet* have been detailed: also the various forms of marriage, polygyny and polyandry are described and discussed.

11. *Taboo and Discipline of Sex and Family*, R. K. MUKERJEE.

Sex taboos are social mechanisms devised with a view to limit the violent and exuberant out-

bursts of sex and regulate these along certain defined and legitimate channels. The institution of marriage both in the savage and more advanced society is protected by taboo. Other taboos seek to limit the occasions of contact between the sexes and maintain the normal routine of social behaviour. The institution of ■ bachelors' house and unmarried girls' house, found among many primitive peoples, also often subverts the purpose of providing opportunities of courtship and marital apprenticeship and generally undertakes the function of tribal schooling.

In the course of social development approved forms of sex conduct rather than negative injunctions play an important part in governing marital life and behaviour. Man's conduct is socialized through the gradual interlacing of his impulses and interests. In family life in advanced society, taboos and laws ■ applied in very few cases for the prevention of sex transgressions, reliance being chiefly had on the attitudes which social environment and family traditions inculcate. From magic and taboo to law and punishment, and from these latter to attitudes, moral and social,—this seems to be the normal development of means of sex discipline.

12. *The 'Shaman' personality : ■ psychological evaluation.* N. N. SENGUPTA.

The Shaman exhibits in certain cases a marked change in the 'sex-personality'. In other cases there is evidence of catalepsy, manic-depressive

psychosis and also of schizoid tendencies. The paper attempts on the basis of these data to formulate a psychological estimate of the Shaman personality.

13. *Mental Diseases among the Primitive People*,
N. N. SENGUPTA.

(1) The paper summarizes the available data on the frequency and special forms of mental diseases found among primitive peoples of different regions of the globe.

(2) It concludes on the basis of such facts that the cultural races are less susceptible to mental disorders in comparison to primitive peoples.

(3) It attempts to formulate certain general conclusions concerning the differential social factors operative in the two cases, of the primitive and of the civilized peoples.

14. *Totemism in Ancient India*, C. D. CHATTERJEE.

The history of totemism in ancient India can be traced as far back as the time when the Aryans had settled in the Punjab and their eastward migration — about to commence (c. B.C. 1200). Unfortunately, the information preserved in the literary works of the Vedic and post-Vedic periods is so very meagre that it is not possible to form a clear idea of the social conditions of the totemic peoples of India in the remote past, or to give a detailed account of their influence on the Aryan culture and civilization. In this paper, an attempt has been made to trace the history of totemism

from the time of the Aryan settlement up to about B.C. 200 on the basis of the material available in Sanskrit and Pali works.

It now appears to be a certainty that some influence of totemism can be traced in the Rgveda, the oldest literature of India, ■ will be seen from the data brought together in this paper. The influence becomes all the more marked in the later Vedic works as well ■ in the epics, the Ramayana and the Mahābhārata, though none of them has preserved the name of a single totemistic clan. The present writer has been able to discover the names of some of these clans in Greek works relating to Ancient India, as well as in Pali texts and commentaries composed at different periods. He has also shown how under an imperial order members of some totemistic clans left India and went to Ceylon where they finally settled down. The descendants of these migrants retained their respective totemic characters for many generations and at times figured in the history of that country. But they do not appear to have come into cultural contact with the Vādda community, the dolicho-platyrrhine jungle tribe of Ceylon.

15. *The Disposal of the Dead among the primitive tribes of Travancore,* L. A. KRISHNA IYER.

Burial and cremation are the two common methods of disposing of the dead. Most of the primitive tribes of Travancore bury the dead. Burial has for its object the prevention of the ghosts of the dead from tormenting the living. The devices

intended to prevent the return of malignant spirits are manifold. Among most of the tribes of Travancore, a stone is planted at the head and foot of the grave. Great care is taken about the toilet of the corpse. The dead body is washed, well dressed in new garments, for the dead must enter the spirit world in their best array. Great importance is attached to the proper disposal of the dead. The idea is that the dead would walk unless the dead body is disposed of with appropriate ceremony. If there is no propitiation, the restless spirit of the deceased will walk among them, bringing sickness, want, and ravages of wild animals. The dead are buried with all the paraphernalia which belonged to them in life. Everything belonging to the dead man is put out of sight and buried with him. All the tribes lead a pure life during the period of pollution and refrain from sexual intercourse, ordinary work, and amusement.

16. *The cultural National Outlook*, S. C. Roy.

Each people in the world has in course of ages evolved a unique culture of its own, through the combined influence of environment, heredity, and varied contacts and social impressions. Different cultures have thus developed each its own cultural pattern, its unique racial genius, its own cardinal tone, its vital rhythm.

Through mutual contact and helpful exchange of cultural-traits and ideas, different cultures enrich each other. And this is how group-cultures de-

velop, and provincial cultures combine into a continental culture. A wider synthesis of different cultures is expected to produce a richer world-culture, without impairing the individuality of each particular sectional, regional or racial culture. It is these variations in sectional, regional, or racial cultures within a province or a continent that impart charm, reality, and fullness to human culture as a whole.

17. *Notes on the different types of apparatus used for smoking 'Pancharang',* B. K. CHAUDHURI.

In this note the author studies the various forms of apparatus used for smoking a particular kind of 'nasha' known as 'pancharang' (usually a blend of five kinds of 'nashas' or intoxications, viz., *Ganja, Guli, Charas, Siddhi, tobacco*). The apparatus are classified into two main groups, viz., (1) without water chamber, (2) with water chamber. The former one is a fire-baked pottery work just like a 'chilam' used for smoking '*ganja*', into five small bowls. The latter is a complex one, and may be divided into two sub-groups, viz., (i) water chamber and the mixing chamber one and the same, (ii) separate mixing chamber and water chamber. The sub-group (ii) may again be classified into two types, viz., (a) single liquid chamber, (b) double liquid chamber. The latter usually contains country liquor in one and ice water or rose water in the other. Bowls of the groups No. 2 are differently made, some are fixed with the composite bowl while the others are

separable. In some cases the bowls are made perforated ■ which particles of 'ganja' or charas' are sprinkled and smoked. A detailed descriptions of the apparatus with photos and diagrams are given with a note on its distribution.

18. *The Sun as ■ folk-god*, NANIMADHAB CHAUDHURI.

Sun-worship has broadly speaking, two aspects. In one aspect he is worshipped as the abstract source of light and life and in the other ■ ■ folk god connected with fertility and having bucolic attributes.

The folk aspect of sun-worship remarkably rich in the Rgveda, is connected with cattle, agriculture, marriage, fertility and cure of disease. In the post-Vedic literature the as a folk god is ■■■■ concerned with cure of disease and protection of cattle. The Sun as the guardian deity of herdsman is a completely individualized, anthropomorphic god in the Rgveda and this connection reappears in the later texts under new environments embodied in Gopala-Kṛṣṇa. The Vedic tradition of the Sun ■ a cure god merges at a later period in ■ rich cult possibly substantially borrowed from foreign sources. The Sun god appears to have been worshipped in connection with agriculture ■ a rural deity in Bengal in the Middle Ages and was identified with the Buddhist god Dharma probably under the same aspect of of an agricultural deity. In Brahmanical society folk worship is offered to the Sun god for securing domestic happiness and offspring; in non-Brahmanical society, for good harvests and offspring.

There is evidence of the existence of folk worship of the Sun in other ancient lands from pre-historic times; in India apart from the purely tribal worship of the Sun there is an unbroken continuity of folk worship of the Sun from the early Rigvedic age up to the present time.

19. *Dynamics of Caste*, R. N. SAKSENA.

Since Risley's analysis of the processes of Caste formation about 40 years ago, no serious attempt has been made to study the processes of Caste formation. New castes are even now being formed as a result of fission. A difference of locality, adoption or abandonment of a degrading occupation, a change in social practices, or even increase of prosperity may lead to fission. Cases of fission due to change of locality are rare, since all such barriers have now been broken due to improved means of communication and transport. In some cases the adoption of degrading occupation by certain families has resulted in the social disaster of that group, compelling them to marry among themselves, and thus to form a separate sub-caste. Change in social practices also leads to the formation of new castes. Due to increased wealth and prosperity some castes are trying to rise in the social scale. The first thing they have done is to stop widow-remarriage and then they have tried to include themselves in the higher group. Changes in castes due to pollution including alleged low origin may be traced in some cases.

Finally, the author traces the stages through which primitive tribes, by giving up their animistic practices and beliefs, are being absorbed in the Hindu social system and forming separate castes.

20. *Prehistoric rock carvings*, D. Sax.

The writer describes some prehistoric rock carvings on a series of erratic blocks near Campbellpore, Punjab, first noticed by the Yale Cambridge N. India Expedition in 1935. The writer in a recent tour has observed more of such erratics containing carvings of interesting designs.

21. *A description of the Nicobarese rat-trap*, R. R. MOOKERJI.

The paper deals with a detailed description of the type of rat-trap used by the Nicobarese. Morphologically the trap bears a very close affinity to the traps used in Sumatra and Samoan Islands for the same purpose, giving an additional proof of the cultural connection of these regions.

22. *The Kabadi system in Bastar State*. T. C. R. MENON,

The Kabadi system of Bastar by which an aboriginal, suddenly met by a demand for cash, takes a loan from a master, and repays it in the form of agricultural services on remuneration, has the tradition of centuries behind it. In Bastar, where the tenants cannot sell their holdings and where personal belongings count for but a trifle, the average aboriginal cannot raise money un-

aided for such unavoidable expenses — that for a marriage where bride-price has to be paid, or compensation to the girl's maternal uncle or for such unexpected emergencies as a heavy fine in a criminal or excise case. The Kabadi loan is a loan without security, the only kind that a moneyless aboriginal can raise. It helps him out in an emergency, and as such it is an institution which keeps up the stability and equilibrium of society. The various uses and abuses of the system have been detailed. How far the system differs from slavery or forced labour is explained. Remuneration of Kabadis, rules regarding residence, steps taken by the administration to wipe out the evils of the system and to end it generally are all fully discussed. Equivalents of the Kabadi system in other parts of the country are also described.

23. *Effect of culture-contact on the Garos of Assam,* J. K. Bose.

The Garos are generally found in the Garo Hills, Assam, but some of them have migrated and settled in the plains. In this paper the author discusses the Plains-Garos of Mymensingh, who came in contact with the neighbouring people of that place. As a result the Garos have imbibed the culture of the local people and have considerably modified their own culture. This change of culture from various aspects of their life is discussed in the paper.

24. *Notes on a fish-gorge from Bengal,* T. C. Das.

Description of a type of fish-gorge of the spring variety, found by the author in Tippera District,

Bengal. Distribution of the straight-gorge and its relation with the former variety. Antiquity of the straight-gorge in the West and the East. Probable origin of the Indian spring-gorge.

25. *The Murias of Narayanpur, Baster State*,
 KR. INDRAJIT SINGH and D. N. MAJUMDAR.

The authors describe the social life of the Murias whom Grigson has called Jhoria Murias. The various customs which are indigenous to the tribe are elaborately described and the influence of contacts with the higher cultural groups of the State discussed.

26. *Caste and credit in rural Society*, R. N. SARKEN.

The paper is a study of rural indebtedness as it affects the various castes in a particular locality. The creditors are reluctant to advance loans to the high castes in spite of the fact that they offer better security, because they have become notorious for lack of industry, and rather questionable honesty, and also for extravagance. On the other hand, some of the low castes, e.g. Chamar and Pasi, enjoy good credit due to the economic service they render to the community. Therefore, the status of the caste is not always an important factor in heightening the financial status of the caste.

But the high castes may have gained a bad name for their extravagance or even vice; they still get better terms of credit than the low castes, partly because of the better securities they can

offer and partly because of their social status. In comparison to other castes, the Chamars and the Pasis are more prosperous because they have two sources of income—land and labour—which supplement each other. Social causes such as huge expenditure at marriage, birth of child, etc., have helped to increase the indebtedness of the high castes. But the cause of the indebtedness of the low castes is primarily economic. The factors that have important bearing in caste indebtedness are detailed and discussed.

MISCELLANEOUS CORRESPONDENCE.

To the Editor of *Man in India*.

Sir,

I write with reference to Dr. Bonnerjee's rejoinder on the *Origin of Caste* in the December number of *Man in India*, but I hope he does not regard me as ■ hostile critic. The reason why I said that his theory appeared to me contradictory is, as he himself concluded, the fact that although he anticipated me in ascribing the origin of caste to ■ belief in magic, he nevertheless regarded it as introduced by Indo-European conquerors. I do not for ■ moment question his statement that these believed in magic, and I do not know of any people, however civilized, who are really free from primitive superstitions, but I can see no reason why the Indo-European invaders should be regarded as having introduced ■ system based on magic when it seems likely that the previous occupants of the country were themselves at least equally steeped in magic. I still suggest that the basic ideas from which the caste system grew long antedate in India the arrival of the Rigvedic Aryans. The greater strength of caste in Southern India, and the existence of analogous ideas throughout the Pacific seem to me to point this way, though the subject is naturally one on which no one could venture to be dogmatic.

I am

yours etc.

J. H. HUTTON,

INDIAN ETHNOLOGY IN CURRENT PERIODICAL LITERATURE.

In *Man* for January, 1939, Mr. T. C. Das contributes a note on "*Clan-monopoly of personal names among the Purum Kukis*". Having regard to the smallness of the population of each particular clan, it appears reasonable to infer that what has since developed into a clan monopoly of personal names may have had its origin in the age-long custom of choosing the name of a dead kinsman, and even when the custom was not strictly followed, predilection for familiar names would ripen into a practical monopoly of names.

In *Man* for March, 1939, H. J. E. Peake in an article on "*The First Cultivation of Wheat*" notes that the more primitive forms of 'Bread Wheat' are grown in West India and Kashmir, besides Persia, Afghanistan and mountainous Bokhara.

In the *Folk-Lore* for December, 1938, Water Asboe describes some "*Social Festivals in Ladakh Kashmir*".

In the *Quarterly Journal of the Mythic Society*, for January 1939, A. Padmanabha Iyer describes in an article headed "*Serpent Worship in Travancore*" the ceremonies at and legend connected with a *Kavu* or sacred grave for serpent worship. The same number continues the articles on "*Studies in Bird Myths*" and "*Studies in Plant Myths*" by the late S. C. Mitra.

In the *Journal of the University of Bombay* for January, 1939, G. R. Pradhan contributes a

article on "*Folk-Songs from Malwa*", and B. L. Mankad contributes an illustrated article on the "*Rabaris of Kathiawar (A Social Study)*". One interesting feature of the Social organization of the Rabaris is that they are divided into three inter-marrying groups, each group consisting of a number of exogamous stocks — between whom inter-marriage is taboo. Different aspects of Rabari culture are briefly described.

In the *Indian Historical Quarterly* for December, 1938, Dr. N. K. Datta writes on "*Widows in Ancient India*", and Dr. J. B. Chaudhuri on "*The Position of Mother in the Vedic Ritual*" and on "*The significance of the Vedic Rite Pumsavana*". He shows that the present day rigid rules for ■ widow did not exist in the Vedic period and the custom of levirate was practised. The practices of *niyoga* and widow marriage appear to have existed side by side until Brahmanical law-makers like Āpastamba and Manu began to pronounce against them.

The practice of *satti*, probably a relic of savagery, was regarded with disapproval in the *Rigveda* and was in Vedic times treated as ■ symbolical function of which the actual execution was discontinued. The *Mahābhārata* mentions only two instances of *satti*, and the few cases of *satti* recorded in the *Epics* and the *Paurāṇas* occurred in the families of kings and generals. "But so rare was the custom even among the Kṣatriyas that no *satti* took place after the carnage of Kurukshetra". "It is likely that such

a practice was prevalent among the Seythians or Sakas, and that the attempts of the Brāhmaṇa legislator to establish *satti* in the fifth and sixth centuries A. D. were helped ■ much by the circumstances of the time ■ by the continuance of the practice in the families of those barbaric chiefs who were admitted into the rank of Kshatriyas". The mother in the Vedic ritual was regarded ■ the highest *Guru*. "She is to be respected by her children ■ thousand times more than the father". In pre-natal, post-natal, and after-death Samskāras (religious rites), the position of the mother is very important.

The purpose of *Pumsavana* rite is to avert any evil to the child in the womb and to regulate the sex of the future child according to the wishes of the parents. It is an error to suppose that the *Pumsavana* rite is performed in order to have male children only. The meaning of the word 'Pums' in the compound 'Pumsavana' is not to be limited to males only, the usual method of *Sutrakāras* being to include feminine in the masculine gender.

In *Indian Culture* for January, 1939, Dewan Bahadur K. S. R. Sastri contributes an article ■ "The *Vaishnava* Cult in India" of which he traces the key-ideas in the Rigveda. Mr. K. K. Ganguli in ■ 'Note on the Nose-Ornament in Mohenjo-Daro' adduces considerations that suggest that the finds do not disclose any trace of ornamen-

tation of the nose, and that Mackay's supposition to the contrary does not rest on a solid basis.

In *The Modern Review* for February, 1939, Devendra Satyarthi continues his "*Rajput Songs of War*"

In the ■■■■ journal for March, 1939, under the caption "*The Aborigines in the Province of Bihar*", Rev. C. F. Andrews publishes, with an introduction referring to the good work done at Shantiniketan for the local Santals, ■■■■ appeal by a silent and unknown worker among the Santals of Bhagalpur, for generous support and co-operation in the cause of aboriginal uplift in the Santal Parganas and Chota-Nagpur. The 'unknown worker' also adds a programme of work, and Mr. Andrews very pertinently concludes by saying that "patronising help is often worse than useless, and there must be ■■■■ intense love at the back of every effort that is made", and "the motive also must be pure, and not mixed up with political or economic exploitation".

The *New Asia* for January, 1939, contains an illuminating article on "*Art and Archaeology in Japan*" by Dr. Kalidas Nag.

In the *New Review* for January, 1939, Father A. Lallemand in an article on '*Racialism*' refutes 'the racialist idea of fatality and determinism' and emphasises the truth "that race is not the one and only factor of human achievement, that the self must play its part, that outside influences (e. g., climate, education environment) are to be

called in", that "heredity (which is one of the many factors in man's destiny) can hardly be called racial when races are so very much mixed anywhere", and "has rather a family touch than a race complexion" and that "in any case heredity never fixes anybody's destiny in a way which is inescapable".

The ■■■■ number of the *New Review* contains highly suggestive comments by the Rev. Father H. Heras ■■ Mackay's two-volume Report entitled "*Further Excavations At Mohenjo-Daro*" recently published by the Archaeological Survey of India.

In the February (1939) number of the *New Review*, Fr. A. Lallemant in an article on '*the Racial Myth*' summarises the view of the German prophet of Nazism Alfred Rosenberg's theory of racialist religion which regards 'soul as the inside view of the race' and 'race as only the outer view of the soul', and denies the immortality of the soul, and the Christian theory of original sin and redemption, and characterizes it as 'a sign of soul-shrinking'.

In the March number of the *New Review*, Rev. Father Sequeira in an article on "*Discipline in India*" by tracing the history of Indian Education from the earliest Vedic times down to pre-British days, shows that "the Indian conception of *discipleship* (which is the true meaning of *discipline*) is, if any thing, stricter than that now prevalent in the West, for it is internal (even religious) no less than external". The explanation of the relaxation of discipline to-day must be found in external forces

not in the Indian temperament. "It was an evil day for Indian education when the 'class' was substituted for the 'disciple' and the lecturer for the *guru*, for it was an unperceived destruction of the Indian ideal of education."

NOTICES OF BOOKS.

Facing Mount Kenya ; The Tribal Life of the Gikuyu. By Jomo Kenyatta, with an Introduction by B. Malinowski. (Secker and Warburg. London, 1989). Pp, XXIV+339. 12s 6d.

In this particularly interesting volume the author, who is himself an African writes about his own people—the Gikuyu and, in the light of a life-time of personal experience and intimate knowledge from the inside, gives a full and first-hand account of the different aspects of the tribal life of his people—their origins and kinship system, economic life including land-tenure and industries, system of education, initiation of youth, sex life, marriage system, government, religions and magical beliefs and practices. Our author writes :—

“The key to this culture is the tribal system, and the bases of the tribal system are the family group and the age-grades, which between them shape the character and determine the outlook of every man, woman, and child in Gikuyu society. According to Gikuyu ways of thinking, nobody is an isolated individual or rather, his uniqueness is a secondary fact about him ; first and foremost he is several people's relative and several people's contemporary. His life is founded on this fact spiritually and economically, just as much as biologically ; the work he does everyday is determined by it, and it is the basis of his sense of moral responsibility and social obligation. His personal needs, physical and psychological, are satisfied incidentally while he plays his part as member of a family group, and cannot be satisfied in any other way the fact that in Gikuyu language individualism is associated with black magic, and that a man or woman is honoured by being addressed as somebody's parent, or somebody's uncle or aunt,

shows how indispensably kinship is at the root of Gikuyu ideas of good and evil. The vital reality of the family group underlies the whole social and economic organisation of the Gikuyu. It means, for instance, that the authority of the tribe is different in kind from that of the European national State. The Gikuyu does not think of his tribe — group of individuals organised collectively, for he does not think of himself as a social unit. It is rather the widening-out of the family by a natural process of growth and division. He participates in tribal affairs through belonging to his family, and his status in the larger organisation reflects his status in the family circle. The visible symbol of this bond of kinship is the family land, which is the source of livelihood and the field labour. In Gikuyu society the system of land-tenure can only be understood by reference to the ties of kinship. In relation to the tribe, a — is the owner of his land, and there is no official and no committee with authority to deprive him of it or to levy a tax on his produce. But in — far as there are other people of his own flesh and blood who depend on that land for their daily bread, he is not the owner but a partner, or at most a trustee for others. Since the land is — in trust for the unborn as well as for the living, and since it represents his partnership in the common life of generations, he will not lightly take upon himself to dispose of it. ...Since the Gikuyu outlook is essentially social, there are certain mutual claims which are generally assumed. Relatives help and consult — another in matters of common concern ; anyone who is in need will go to his nearest prosperous kinsman as a matter of course, and hospitality is taken for granted." There is — master-and-man relationship in economic life, and there need be little or no argument about the division of labour ; people grow up to know what is expected of them and what are the limits of their obligations. For such a complete community life a careful training is required and the Gikuyu educational system supplies it. On its technical side it is practical from the earliest years. ...There is work for him to do as — as he has acquired the skill to do it properly, and he hardly distinguishes work

from play. As he grows older the age-group gives him the democratic companionship of equals. ...Since there is plenty of necessary activity, of a kind suited for every age, the steps of his education...are real contributions to the needs of group-life. ...His social education is imparted to him by image and ritual, the rhythm of the dance and the words of the ceremonial song...The code which regulates the behaviour of relations by marriage has to be very carefully learnt and punctually followed...The age group system gives the Gikuyu a good grasp of the principles of democratic selection...Gikuyu religion is a dramatisation of belief, and belief is a matter of social experience of the things that are most significant to human life.

In Gikuyu life the earth is so visibly the mother of all things animate, and the generations are so closely linked together by their common participation in the land, that agricultural ritual, and reverence for ancestral spirits, must naturally play the foremost part in religious ritual.....Magical practices, like religion, are inspired by the daily economic and social activities of the people, and run through and fertilise these activities and refer them to the mysterious forces which surround human life. ...It is all these different aspects of life together that make up a social culture. And it is the culture which he inherits that gives a man his human dignity as well as his material prosperity. It teaches him his mental and moral values and makes him feel it worth while to work and fight for liberty. But culture has no meaning apart from the social organisation of life on which it is built. When the European comes from the Gikuyu country and robs the people of their land, he is taking away not only their livelihood, but the material symbol that holds family and symbol together. Along with his land they rob him of his government, condemn his religious ideas, and ignore his fundamental conceptions of justice and morals, all in the name of civilization and progress. By driving him off his ancestral lands, the Europeans have robbed him of the material foundations of his culture, and reduced him to a state of serfdom incompatible with human

happiness. The African is conditioned, by the cultural and social institutions of centuries, to a freedom of which Europe has little conception; and it is not in his nature to accept serfdom for ever. He realises that he must fight unceasingly for his own complete emancipation; for without this he is doomed to remain the prey of rival imperialisms, which in every successive year will drive the fangs more deeply into his vitality and strength."

Dr. Malinowski, in his Introduction to the book, very truly characterizes the book as a "pioneering achievement of outstanding merit. If other aboriginal peoples who are being sought to be exploited and 'civilized' by Western 'civilizers' had highly educated and thoughtful spokesmen like Mr. Jomo Kenyatta, they would assuredly have expressed similar views.

One important social change consequent on the influence of Christian preaching among the Gikuyu and their capacity for spontaneous adaptation deserves special notice. This is the rise in 1929 of a new religious sect in East Africa known as *Watu wa Mungu* (People of God) or *Arathi* (Seers), of which an account is given in Chapter XI of the book. It is an effort from within to assimilate what appeals to them in the Christian code and culture, while adapting it to the needs of the life of the polygamous Gikuyu. It sanctions polygamy and communion with the spirits of their ancestors. Their prayers are a mixture of Gikuyu religion and Christian; with certain additions new to both religions.

The book is one of absorbing sociological interest.

Passing of the Aborigines By Daisy Bates. With Foreword by the Hon. Sir George Murray. 1938) Pp. XViii +258. 10 s. 6 d.

This delightful book is the record of about forty years spent by the author in devoted service to the Natives of western and southern Australia, who, ■ Sir George Murray says, are slowly perishing under the influence of ■ civilization which is alien to their instinct and destructive of their means of subsistence." Of the native Australians of Perth the Bibbulmun Race the largest homogeneous in all Australia our author writes,—“The black man survived the coming of the white for little more than one lifetime. When Captain Stirling landed on the coast in 1829, he computed the aboriginal population of what he had marked out ■ the metropolitan area at 1,500 natives. In 1907 we buried Joobaitch, last of the Perth tribe.” With the coming of the white man, the root-foods of the Australian aborigines began to be ploughed up, the tracks to their water holes began to disappear, and the tribes began to decrease in number. As our author writes “When the native’s little group is gone, he loses the will to live, and when the will to live is gone, he dies. Efforts to protect the tribes from extinction through the creation of Special Aborigines-Department in the earlier years of this century came too late. Efforts at evangelization, like the break-down of their tribal laws through contact with civilization, also proved unfortunate. Our author writes,—“The one great fault of our attempts to Christianize

the Australian aborigines lies in our violent sapping of their own traditional beliefs in our endeavours to replace these by teaching the rudiments of the special creed to which we ourselves belong or rather to the beliefs which we have reached in our present state of culture. ... They cannot catch up with us in one generation."

The love, sympathy and service of such specimens (alas! too few) of foreigners — the author herself, on whom they bestowed the loving appellation of *Kabbarli* (Grandmother), and such rare specimens of Christian Missionaries as some of the Spanish Trappist Fathers make some amends for the incalculable harm thoughtlessly done to these simple children of nature by most foreigners, whether white or coloured.

The present volume gives us vivid glimpses in to the real life, habits, and sociology of these vanishing Australian natives. And students will eagerly look forward to the publication of the exhaustive ethnography of these tribes which the author promises and for which she has patiently collected materials (in several heavy loads of manuscript cases, as we are informed by her) in the course of some forty years lived among them in the closest association.

Philippine Pagans. By R. F. Barton (Routledge, 1938) Pp. xvii + 271. 15s.

The author of this interesting volume spent eight years (1908-1915) among the If augaos as

school teacher and came to know them intimately. More than twenty years later he again went to Ifugao-land with the special object of anthropological research, and the autobiographies of three fairly representative Ifugaos (two men, one middle-aged and one old, and one old woman) presented in this volume were recorded in May-November, 1937. The author tells us that he asked his informants to relate the things in their lives that they considered most important, and took them down "as nearly in the way they were related as was consistent with fairly idiomatic translation". The author's own comments, explanations and translation of native words are given either in brackets, if brief, or in footnotes, if long. These primitive documents thus give us portraits of typical individuals living and moving in Indonesian culture as the products of that culture; and gives us a view of that culture as seen through the individual Indonesian's own eyes.

Such subjective presentations of primitive life ■ of special importance ■ giving an insight into the mentality and culture of backward people.

The Dark Room. By R. K. Narayan (Macmillan, 1938) Pp. 210. 6 s.

This a novel which depicts family life in southern India. Though Western influence appears to have invaded the corners of the Tamil family depicted in this book, such influence would appear to be extremely superficial. In fact, South Indian domestic life, as presented in this volume, might in its essentials represent middle class Hindu society as it was in Northern

India fifty years and more back. The existence in the house of a "dark room" to which the mistress of the house betakes herself in her anger and anguish when the imperious husband's unkindness upsets her, and the advice given to her while in that condition by a female friend—"I have never opposed my husband or argued with him at any time in my life : I might have occasionally suggested an alternative, but nothing more what he does is right. It is a wife's duty to feel so!" Such sentiments, which appear to have an old world flavour about them, would appear to readers of this book to be still not unusual in south India. As for the story it is well conceived and well told and the characters are types not unfamiliar in India or elsewhere and are well drawn. The foreigner will, however, be quite mistaken if he takes the headstrong husband, Ramani to be the proto-type of the average Hindu husband, although the wifely devotion of Savitri is still a common feature among Hindu wives. The fragment of lowly life in Sakkur village is no less interesting and true to life, and is as realistically presented as the town life of the bourgeoisie.

A Cloud That's Dragonish : A Tale of Primitives. By Verrier Elwin (John Murray, 1938). Pp. 264.

Mr. Elwin gave us, in his two previous books, realistic descriptions, in the light of intimate knowledge and sympathetic insight, of the hard

life led by the aboriginal tribe of Gonds living in villages nestled among the hills and jungles of the Central Provinces in India. In this volume the stage is set wider. The author here depicts the hard and miserable life led not only by the aboriginal Gonds but also by their neighbours, the Pradhans and the Baigas. We have here a vivid picture of the Gonds, proud of royal blood and kingly traditions, with their neat houses of bamboo walls carefully plastered with mud and white-washed, standing each in its own compound containing a little garden of tobacco and field of maize and sweet potatoes, gleaming in the sun on the slopes of the hills; perched higher up on the very top we see the dirty and over-crowded huts of the priestly tribe of Baigas, poor in worldly possessions and power; down below are the houses of the Pradhans, those romantic, music-loving "younger brothers of the Gonds"; and further down we see the house of the solitary Agaria or black-smith family that serves the Gonds, Baigas and Pradhans of village Sitalpani.

Whereas the first two books of our author were concerned mainly with the material ills and physical tribulations and diseases of the aboriginal Gonds, the present volume deals particularly with the spiritual ills of these tribes of the Gond hills, the "dragonish clouds" that overshadow primitive existence,—the belief in and fear of witchcraft and the horrible practices connected therewith.

The denouement of this very interesting 'Tale of Primitives' reveals the dawn of a new spirit—

the recognition of the claims of reason in preference to those of old-world magic and superstition. Wise and honest Panda Babu, the most celebrated Gond *gunia* of the district, though not wanting in respect for reasonable laws and institutions, is represented as lifting "the cloud that had long hung above the village" by exposing the deceit and devilry generally practised under the name of divination and witch-finding. Thus aided by this new preference for reason over the forces of magic and superstition, the young Gond heroine Motiari is rescued from dire disgrace and persecution under which, through the machinations of her family's enemies, she had already been smarting, and a disgraceful death which was about to overtake her.

Vivid realistic description, a pleasant style, the author's intimate knowledge of the details of aboriginal life in India and, above all, his penetrating sympathy and deep insight into primitive mentality, make the book a very useful introduction to the study of primitive life in India. And to those who gather knowledge of primitive life only from abstract scientific ethnographical monographs, books like the present will give a much-needed realistic presentation, however fragmentary, of such life.

The Mind of Primitive Man, By Franz Boas
(Macmillan, New York 1938) Pp x + 285. \$2.75.

Students of Anthropology will eagerly welcome this revised edition of a standard work of primitive mentality. Since 1911, when the first edition was published, a considerable amount of work has been done in all branches of anthropological science from fresh points of view ; and in view of these new data and new view-points, the author has re-written and re-arranged a large part of the book. On a full consideration of all relevant facts our author has come to the conclusion that there is no fundamental difference in the ways of thinking of primitive and civilized man, that the functions of the human mind are common to the whole of humanity, and that a close connection between race and personality, has never been established. Unfortunately race prejudice is still an important factor in life. "Still worse is the subjection of science to ignorant prejudice in countries controlled by dictators." None of the claims for substantial differences between races—Nordic or Negro, 'Aryan' or a Mongolian—appear to be scientifically sound.

"The difference in the mode of thought of primitive man and that of civilized ■■■■■ to consist largely in the difference of characters of the the traditional material with which the new perception associates itself" (p. 221). "Neither among civilized nor among primitive men the average individual carries to completion the attempt at causal explanation of phenomena, but only ■■■ far as to amalgamate it with other previous knowledge, ■■■ recognize that the result of the whole process depends entirely upon the character of the traditional material." (p. 222) "An important change from primitive culture to civilization seems to consist in the gradual elimination of what might be called the emotional, socially determined associations of sense-impressions and of activities, for which intellectual associations are gradually substituted." (p. 252). Our tendency to evaluate an individual

according to the picture that we form of the class to which we assign him, although he may not feel any inner connection with that class, is a survival of primitive forms of thought. The characteristics of the members of that class are highly variable and the type we construct from the most frequent characteristics supposed to belong to the class is never more than an abstraction hardly ever realized in a single individual, often not even a result of observation, but often heard tradition that determines our judgment. Freedom of judgment can be attained only when we learn to estimate an individual according to his own ability and character. Then we shall find, if we were to select the best of mankind, that all races and all nationalities would be represented. Then we shall treasure and cultivate the variety of forms that human thought and activity has taken, and abhor, leading to complete stagnation, all attempts to impress one pattern of thought upon whole nations or over upon the whole world." (p.272)

Principles of Economic Sociology. By D. M. Goodfellow. (Routledge, 1939). Ph. X + 289 12s. 6d.

In this volume the author, who was a Lecturer in Economics in the University of Cape Town, seeks to trace and illustrate the principles of Primitive Economics in the life of the Bantu people of South and East Africa. As between their two main sources of subsistence, with agriculture and the herding of live-stock, the balance has now shifted towards agriculture. Our author how shows technique, knowledge, social organization and religion "all combine to make of Bantu agriculture a system of activities coincident at every point with the important element of the peoples lives". "Agriculture satisfies not merely the primary need for food,

but also the complex needs which are so intertwined with Bantu social organization. Agriculture is in itself a complete system of activities, having many aspects, which coincide with needs. Its social aspect is strong and gives direct satisfactions. Its religious aspect helps to control the outlay of resources. Its political aspect makes possible the government of units, big and small, from the group of homesteads up to the great tribe. Its economic aspect, intertwined in practice with all of the others, is one of the dominant ways in which the Bantu share tasks, expend resources, share rewards and get the best results within the limits set by their own culture for effort made."

Dr. Goodfellow has clearly brought out how the structure of a society plays a fundamental part in the making of economic decisions.

A Primitive Philosophy of Life. By J. H. Hutton, (Clarendon Press, 1938) Pp. 54.

This is the Frazer Lecture delivered by Prof. J. H. Hutton in 1938. The customs connected with head-hunting among the Nāgās of Assam first suggested to Dr. Hutton the idea of the primitive Nāgā's belief in the soul — a material or semi-material substance separable from the body it temporarily inhabits. The similar doctrine among the Karen tribe, of Burma and parallel beliefs in soul-substance elsewhere in Assam and

in Indonesia, and such as the belief among the Lushais of Assam in the occasional metamorphosis of soul, of the dead into hornets or into the form of dew and taking re-birth in human form in the event of falling on a person, confirmed in this view. "Once given the idea of soul-stuff, of life, that is, as a finite substance permeating organic and even inorganic matter, ideas of animism and totemism, metempsychosis, of *mana* and of magic, may all evolve from this same origin,—the idea of life-matter. The author makes the plausible suggestion that probably the limitations of primitive language (which is poor in abstract but rich in concrete terms) have played a part in determining ideas as to life and the soul, and in canalizing, — it were, the development of ideas of the soul. Thus the idea of a plurality of souls would appear to have arisen from "attempts to express in concrete terms the supposed activities of soul or of life-matter."

This lucid exposition of the author's philosophy of primitive life demands careful and serious consideration.

The Dravidian Culture and its Diffusion. By T. K. Krishna Menon (V. Sundra Iyer and Sons. Ernakulam, 1937). Pp. iv+107. Rs2, or 3s.

That Dravidian culture, which has a long and glorious history behind it, forms the main substratum of modern Indian culture including Hindu

religion, and that the Dravidian race of Mediterranean affinities forms a main substratum of Indian ethnology is now generally admitted by scholars. In the present book, the author has done a real service to the reading public by industriously collating and setting forth in brief various items of fact and opinion — the point, many of which are of undoubted authority and a few of doubtful validity. Opinions referring to the lost continent of Lemuria" having been "the seat of the earliest civilization" (p. 11), — quotations from Annie Besant and Bishop Leadbeater on matters of Ethnology (p. 65, foot-note), would appear to be out of place in a scientific brochure. Authoritative geological opinion speaks of the so-called "Lemurian" as having been submerged probably before the evolution of man, and the theosophist's 'root-races' and 'sub-races' are not recognized by anthropologists, and the suggested identification of *Astika* with *Aztec* (p. 76) would appear to be fanciful. Again, the identification of the Mongoloid Nagas with the probably Indo-Mediterranean Nagas of ancient Hindu literature, has little to support it. The categorical statement (p. 57) that "the caste system and the worship of Kali, Siva, Vishnu, Parvati, Subrahmanya, and Ganēsa are of Dravidian origin," would seem to require at least certain modifications and qualifications. The statement at p. 10 that the "Kolarians came from east or north-east" is a doubtful proposition, and the term 'Kolarian' is now antiquated and practically discarded and rightly so. A few other similar doubtful statements might be picked out. One or

two references, too, ■ not accurate, thus the reference to 'Jayaswal' (p. 9) should be to 'S. C. Roy,' and the reference in foot-note 1 to p. 10 should be "Presidential address to the Anthropological section, etc." However, inspite of such minor defects, the book gives ■ fairly good popular survey of the diffusion of Dravidian (particularly Kerala) culture.

Indology.

The Mahabharata Fascicule 9, the first half of Udyogaparvan (1) Edited by Vishnu S. Sukthankar. (Poona, Bhandarkar Oriental Research Institute, 1937) Pp. 400.

By publishing this first critical examination of India's greatest Epic, the talented author and his band of scholarly collaborators of this monumental work have laid all Indian scholars and students and particularly students of Indology all over the world, under ■ deep debt of gratitude. Dr. Sukthankar and his devoted of co-operators are eminently qualified to accomplish successfully this great task they have undertaken. In the December number, 1937, of this journal, in our review of Fascicule 8 of this great work, we said, "If the subsequent parts keep up," as we are confident they will, the high standard of scholarship reached

in the present fascicule, the work will remain ■ standing monument to Indian scholarship." The present Fascicule fully maintains the standard and this notable work with its invaluable textual reconstruction of the Mahabharata will, without doubt remain an endwing monument of Indian scholarship and critical acumen in the domain of Indology.

**"Announcement of important
New Publication"**

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SOCIO-LINGUISTICS IN INDIA.

By

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There are 225 languages in India. Two (Andamanese and Burushashki) are not as yet proved to be related to any other languages; and, of the others, which form groups or families, the Dravidian languages again stand apart; the Austro-Asiatic languages, the Tibeto-Chinese languages and the Indo-European languages are related to forms of speech in use outside India. Some of the Dravidian languages (Kota, Poda, Kûruk, Gonde, Malto, Kui, Brahui) are regarded as non-literary, while others have old literatures behind them. In the Tibeto-Chinese group, Tibetan and Burmese have 'literatures,' both strongly affected by Indian contacts. Lepcha and Meithei have some literature. In the Austro-Asiatic group, Mon (Talaing) and, in recent times, under missionary influence, Khâsia, have literature which in the case of Mon is ancient and, again, affected by Indian ideas. In the Indo-European group written literatures, ancient, important and still influential, distinguish this group from the others.

Then, as to social organisation,—tribal groups with social structures ranging from the simple hunting bands of the Andamanese to the complexity of the Gond groups or the Mundari speakers, have a definite distribution, being found in every State and Province (except perhaps the Punjab) under special conditions and environment. The Caste-system,—so ancient, so rigorous,—extends with differences, from north to south and from west to east, but not to Burma where the social order rests ■ the rules of the *Dhamma-pada*. Islam has strength in the North-west and in Bengal, but there are Islamic societies elsewhere. The Sikhs and the Jains, have their ‘homes’ in distinct areas.

The tribal system is in general a village system. Sometimes a village is ■ entity,—linguistic, political, marital and economic; or it may be linked with others. Elsewhere we have urban and village societies in combination of varying degrees of interdependence and reciprocity, towns and cities which serve as havens of refuge for minorities and are heterogeneous while rural communities are homogeneous. Such in brief are the salient features of the general conditions of social life in India. Everywhere are old and young, men and women, all moving onwards, on a fixed pattern.

Language, says General Smuts (*Holism and Evolution*, p. 245), is a purely social instrument “which is of great importance in the development of individuality.” Anthropologists have learnt from Prof. Malinowski that language is “a mode of

behaviour, an indispensable element of concerted human action; and to regard it — means for true expression or embodiment of thought is to take a one-sided view of one of its most derivate and specialised functions." (*Meaning of Meaning*, p. 480-1).

We know that persons come early into our life (A. R. Brown : *Andaman Islanders*, 2nd edition, 1938, p. 378) and in practical every-day life we use terms of address to the persons — meet, we use pronouns, we use 'imperatives' and we use 'interrogatives.' We know, too, that each word has a meaning which, — Malinowski says (p. 488), "is made up of experiences of its active uses," or, — Smuts puts it, "Through the naming power of language several items of experience can be grouped together under one name." If we assume this to be fundamental, the various modes of address become important. We have to study the personal name, the relationship term, the status term; we seek to know in what conditions, by whom, and how are these used. To understand this we should seek to know all we can about the relationship system, the name-giving methods, the conditions regulating status, in each social and linguistic group. The work done by pronouns (*I*, the speaker, and *thou* [or *you*] the bearer) is very great and we have to study on the linguistic side the various pronoun forms and their functions. We have to study the context of these pronouns which have in some cases a specific social sanction and meaning. Context is an integral element as will be shown later.

If Smuts is right, and I think he is, in saying that "the power of forming general concepts becomes possible only through the social instrument of language," we find in it the means of classifying our experience. We know now something about the Classificatory Systems of Relationship. (See Prof. Radcliffe-Brown's *Studies in Oceania*) and can realise that they are realities, not curiosities, and based on facts.

But by language we classify other experiences as well — those of persons and as "the word has a power of its own, is a means of bringing things about, is a handle to acts and objects and not a definition of law" (Malinowski, p. 489). We have to see how 'things and objects' are 'classified' by linguistic devices. This brings us again into social life at once, for we find that with the Andamanese, in the Burusho, with some Tibeto-Burmans, with some Austro-nesian languages, as also in America and Africa, there is a method of classification based on the 'part and whole' division, and this has far-reaching effects. Does this mean the same, work in the same way in the Hindukush, — in the Bay of Bengal? Some people like to indulge in speculations and guesses about origins and diffusion and they can tackle these matters as they please. The better, but the slower, way is to see how each society works, what these things — in, and to, that society, how language works. To do this we have to restrict ourselves almost entirely to modern, well-balanced heads of non-litera-

turalised tribalists; and we have them in India, as will be seen in later articles.

Thus, and thus only, can the comparative method—so dear to many, so misleading if incompetently used,—be safely employed, because we shall then know something about the real meaning and the functions of any custom to, and in any society.

II. TRIBAL CULTURES AND ACCULTURATION.

By

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Introduction.

As a field investigator, I have had the privilege of studying first-hand a number of tribes and castes living in accessible and inaccessible ■■■ during the last twelve years. In all these investigations I had assumed more or less a monographic attitude so that like all monographists, I fixed my attention on a single culture at a single epoch of its existence and tried to delineate it with the utmost fidelity. I found this attitude extremely helpful as it revealed the subtler aspects of the culture concerned which would have been difficult to decipher had the culture been differently viewed. This is why almost all field anthropologists have written monographs and our knowledge of primitive social institutions is derived mostly from monographic studies of savage or semi-savage cultures. We have in India ■■■ very important monographs ■ primitive tribes. Some of these, however, are extremely authentic ■ the authors of these monographs have taken immense care and pains to describe the traits of each culture with scientific accuracy. Such, for example, are the monographs on the Chota-Nagpur tribes by Sarat Chandra Roy, those of the Naga tribes of Assam by Dr. J. H. Hutton and his colleague Mr. J. P. Mills and a recent publication by Mr. M. V. Grigson on the Marias of Bastar.

There is, however, one inherent defect in this monographic delineation of cultures, a defect which becomes increasingly vital as we proceed to describe cultures which have been penetrated by other cultures. The monographic method in amateur hands has invariably failed to separate the native warp from the foreign woof, and has failed also to evaluate the importance of the rôle of diffusion in cultural progress. In India most of the tribal groups have come in contact with higher social groups and rites and customs introduced from highly organized societies have blended with those of a primitive or infantile character. It is therefore, imperative that the monographic method, though highly scientific should be followed with caution as the conditions under which the tribal groups live to-day have undergone tremendous changes. How far social life has deflected from tribal norms under pressure of alien cultures needs to be estimated before the picture of a culture may be complete. This has made me undertake a comparative study of the social institutions of a number of groups living in a particular geographical area, in order to estimate the rôle of cultural contacts in primitive social life. Analysis has shown how significant are the effects of such contacts, how social groups are adapting themselves to changed socio-economic conditions, also how maladaptation is leading to tribal extinction or absorption into ——— dynamic and vital cultures.

In 1929, two years before the census of 1931 ——— undertaken, I made a first-hand study of the Korwa (Mirzapur) culture and for the first time I could realize the importance of cultural contacts on primitive

races. In the District Gazetteer of Palamau, the Korwas are described as follows: 'In appearance they have a greater resemblance to the African Negroes than any of the Munda tribes, round faces, very black skin, large mouths, very thick lips and broad flat noses. They are short, thick-set men with deep chests and broad shoulders giving the idea of great power, at the same time they are exceedingly active. Like all wild tribes they are very poor cultivators and subsist upon herbs and roots and the produce of the chase'. Such a active and powerful tribe much more interesting from the cultural point of view are the Korwas of Mirzapur who are distributed over the fringes of the Chota Nagpur Plateau and are at present a dying tribe with little or no ambition in life, scarcely getting a full meal a day and always at the mercy of moneylenders whose serfs they are for the debts of their forefathers as well as their own. I made an intensive study of the discomforts they were suffering from, and how they have responded to them but could not find that they were on evil days; they have been decreasing in number from decade to decade but to-day they have reached a stage when their disappearance or exit will soon become a *fait accompli*. (See my paper on *Primitive Society and its Discomforts*. *Proceedings, Second Population and Family Hygiene Conference, Bombay, 1938*.)

In an article on 'Race and Adaptability' in the *Journal of the Royal Asiatic Society of Bengal* (New Series), Vol. 25, 1929, No. 1, I wrote the following passage: 'If the rapid disappearance of the primitive tribes is one of the inevitable results of civilization

and if it is due to the change from the unfettered life of the jungle tribes to a so-called ordered existence or a life of degraded serfs, which have been more or less responsible for a complete change in their mental outlook, it is all the more essential that the factors of this civilization should be analyzed and some sort of protection should be provided for in order to enable them to hold their own against the onslaught of foreign ideas'. I discussed in this paper the various factors which are responsible for maladaptation of the primitive stock and also showed how far groups can progress by a process of acculturation provided the impacts of cultures are not too violent. As the Census of 1931 was approaching, I made a special plea for a study of the effects of contacts of civilization on primitive groups.

In the questionnaire issued by Dr. J. H. Hutton, Census Commissioner of India, 1931 which was communicated to me by him, provision was made for such an inquiry. Some data were collected by the various Census Superintendents although it may be mentioned that the inquiry was not systematically followed up in every Province. Besides, the data were often collected through persons whose knowledge of primitive life and conduct was not very satisfactory, with the result that much still remains to be done on this subject. The results of this inquiry have appeared in special appendices to the Census Reports and furnish very important material for comparative study of conditions prevailing in different cultural zones. A similar and more intensive inquiry may be profitably un-

dertaken during the coming Census so that not only the recent changes in tribal life could be known, but it may be possible to check the data already recorded in the previous Census. As there are more than 80 million primitive people in India, which is nearly half the population of Nazi Germany, it is necessary that we know how they live and feel, what are their discomforts and how they can be helped to tide over periods of crises, so that the administration concerned may take more genuine interest in their welfare. ■ should further suggest that instead of collecting data through untrained enumerators or the inferior staff of the local administration ■ is the usual practice, trained anthropologists may be appointed to do this work. I should think that if two or three anthropologists in selected areas, study these processes of adaptation and maladaptation intensively, the data will be of far greater moment than extensive inquiries carried through novices or people whose knowledge of primitive conditions is of doubtful value.

In the present address, ■ propose to discuss the importance of cultural contacts, the effects of such contacts on primitive institutions and various customs and traditions, primitive as well as advanced, and how they have blended and the contribution of each of the cultural groups living in the culture area, to the formation of an interesting culture complex. I have selected for this purpose, the state of Bastar in the Central Provinces, where ■ worked during the last summer vacation and where I intend continuing my investigations in future. I should mention here, my grateful thanks to the administration of Bastar, parti-

cularly to the present Dewan, Mr. E. S. Hyde, I.C.S., whose keen interest in my work has made it possible for me to collect the mass of material I possess on Bastar. An anthropologist, if he wants to do any substantial work, must be in the debt of a large number of people, particularly the administration of the area where he sets to work, but he must be lucky indeed if he finds the administrative head of the area genuinely interested in the work of the anthropologist and such was my fortune in Bastar. The facilities that were provided by the State, and informations which the administrator and his staff supplied me voluntarily, and above all the courtesy that was shown to me and my colleagues, testifies to the generous sympathy the state has for its people. To my student assistants, Mr. Indrajit Singh and Mr. S. A. H. Rizavi, I owe a great deal, as without their help I could not succeed in exploring much of the interior parts of C. P. which we have done during a comparatively short period. Mr. Indrajit Singh has looked to the management of the tour and Mr. Rizavi has acted as photographer.

Descriptive account of Bastar.

Bastar is the largest and most important Zemin-dari under the administration of the Central Provinces. From the report of Captain Hector Mackenzie, Secretary to the Chief Commissioner, Central Provinces, 1863, it appears that the state was originally an extensive one, from about 235 miles from North to South about 182 miles from East to West. By an earlier estimate its area was 20,400 square miles (170

miles from North to South and 120 miles East to West). The revised figures according to the Survey of India, put the ■■■ as 18,725 square miles and it lies between 17'46" to 20'14"N. and 80'15" and 82'1"E. To the north of Bastar lie the Kankar state and the Dhamtari Tahsil of Raipur District, and to the east is situated the Zemindari of Jeypur in Vizagapatam District. The Godavari river forms the southern boundary of the State and the Chanda District lies to the west. The country is hilly and covered with forests. The central and north-western portions of the State are rugged and mountainous. A plateau with an elevation of approximately 2,000 ft. above sea-level lies to the eastern part of the State running from north to south. Jagdalpur, the capital of the State, lies to the south of the plateau. The Indravati river which joins the Godavari after forming the southern boundary of the State, flows across its centre from east to west thus partitioning it into two portions. The north-western border of the State is covered by a ■■■ of rugged hills known as Abujmah which affords shelter to the most primitive section of the population, viz. the Maria Gonds, better known as the Hill Māṛias.

The forests to the south-west contain some valuable teak but towards the north-east the *sal* replaces the teak. In the hills bamboo is luxuriantly grown which provides building material to the people of the State. The climate is damp and unhealthy during the major part of the year, the rainfall is 58'66" while temperature varies from 120. to 46°F. The density of population for the whole State is 24 or 25 persons per square mile and varies from place to place,

from 4 persons or less *per square mile* in the hilly tracts to nearly 50 *per square mile* round about the capital of the state. The total population of the State according to the latest census figures is 5,24,721 of which 2,63,248 are males and 2,61,473 females.

Ethnological and Linguistic Divisions.

The native population of the State is known to belong to the Gond race. The foreigners and immigrants who have settled in the State are believed to have freely inter-mixed with the native population. The order of social precedence in the State is as follows :— (1) Dhakars, (2) Halbas, Kewats, (3) Kurukhs or Dhimars, (4) Kalhars, (5) Sundris, (6) Panora, (7) Gadabas, (8) Bhatras, (9) Parjas or Druvas, (10) Murias, (11) Marias of the plateau, also known as Dandami Marias, and (12) Hill Marias. At the bottom of the social ladder are the Hill Marias and at the top, the Dhakars. Of the remaining groups, Panra, Suuri, Kalhar, Rawat and Kurukh are only functional, and are not numerically very large. Popular opinion ascribes the groups to indigenous origin and for good reason too. The physical features tell their tale and except perhaps the shrewdness of their looks, there is little to distinguish these groups from the tribal population round about them. When these groups live in predominantly tribal, they still intermarry with the latter but where single families live they prefer to retain their identity by marrying their own kind. Some of the more important occupational groups who live scattered all over the State and have become fairly well-to-do; possess traditional beliefs about their descent


from sexual union between men of higher castes and indigenous woman. The cultural differences between the various groups mentioned above, are not very sharp or well-defined and if we follow the order indicate above, the transition from one group to the other is indeed difficult to discern. But the groups at the extremes of the scale certainly differ significantly.

Although the language of the State is Halbi which is a mixed dialect of Hindi, Oriya and Mahraṭhi and is akin to Chattisgarhi which is spoken over wide ■■■ in the Province, the principal inhabitants who are mostly Gonds speak the various dialects of the Gondi language. Dialects of different branches of this linguistic sub-family of languages are spoken by different tribal groups. Some of these tribal groups like the Mārīās of Abujmārh hills have remained isolated till to-day, and few cultural traits of modern times have penetrated into the inaccessible recesses of hills and forests. The Mārīā dialect has remained very much pure as it does not appear to have been influenced by the dialects of other more or less sophisticated groups.

The linguistic map of Bastar will show the zones into which the state may be divided. In the northern border of the State Chattisgarhi Hindi (Eastern Hindi) is spoken. The greater part of the eastern border has Uriya ■ its principal language. In the south-east some islands of Koya dialects which are very similar to Maria spoken in the State are found. Inside the State the Parjas and Bhatras speak dialects which appear to be derived from Uriya or are very much influenced by it. In the south and south-west the language is Telugu while along the

western border a debased form of Marhatti is spoken by a number of scattered communities. The interior of the State is inhabited by various aboriginal groups who speak their respective dialects all affiliated to the Gondi and more or less influenced by border languages in accordance with their proximity to them or the intensity of their contacts with people speaking those languages. The only representative of the Munda speaking people are the Gadabas who are now a small occupational group of palanquin bearers, living east of Jagdalpur and whose cultural life may be distinguished from the rest of the tribal stock though they are gradually conforming to the Halba cultural pattern that we shall discuss below.

All over the State except the Abujmarh hills, the Godavari and the lower Saveri and lower Indravati valleys, Halbi is understood and is the medium of instruction in schools. As will be evident from the linguistic map of Bastar, dialects and languages frequently merge into each other. As Mr. E. S. Hyde points out, most people of Bastar speak at least two languages. Where Halbi is shown alone, Muria, and Gondi are also spoken so that the extent of bilingualism in the State is greater than what has been shown in the Census Report of 1931.

The linguistic map will show that the frontiers of language are very much uncertain and that one group has been influenced by the other. The  is the case with ethnic frontiers. Bastar has been for centuries a veritable melting pot of races and groups. A continual process of admixture has been going on and today all ethnic frontiers appear to have broken

down and the various groups, tribes or castes inspite of their professions to the contrary, appear to have little of racial purity in them and are to-day cultural units in a great culture zone.

A comparison of the somatic characters of the various groups mentioned above based on 16 absolute characters *e.g.*, Head Length, Head Breadth, Auricular Height, Nasal Length, Nasal Width, Nasal Depth, Orbito-Nasal Breadth, Orbito-Nasal Arc, Bizygomatic Breadth, Bigonial Breadth, Distances from Nasion to Crinion, Crinion to Menton, Total Facial Length, Upper Facial Length, Stature and Span, give interesting results.

The small values of the R.C.R.L. only show that the evidence provided by the data is insufficient to justify the assertion that the cultural groups are ethnically divergent. (Cf. R. A. Fisher, 'The Coefficients of Racial Likeness and the Future of Craniometry,' *Journal of the Royal Anthropological Institute*, Vol. LXVI, January—June, 1936.) The greater values of the R.C.R.L. do not prove a racial difference either. As Prof. Fisher points out, 'It is somewhat unfortunate that the name assigned to the coefficient of racial likeness does suggest to many who first hear of it that it affords a measure of the differences or inversely of the likeness, between different races.' Again the same author writes, 'In the case of the coefficient of racial likeness a second consideration should also prevent any attempt to interpret it as a measure of racial difference, for this coefficient is liable to be large if the series of skulls being compared differ considerably in any measurable feature, whatever that fea-

ture may be.' Prof. Fisher summarizes his arguments on coefficient of racial likeness as follows: 'That first criticism, then is that the name assigned has led to some misunderstanding of its function and possible use. The second is that as a test of significance it is not a very reliable one. The coefficient of racial likeness is defective in that it takes no account of the correlation and co-variation of different measurements but treats them as though they are statistically independent. The effect of this is to cause very high or very low values of the coefficient to occur more frequently by chance than they should. This effect increases rapidly, both for statistical and for anatomical reasons, as the number of different measurements used is increased and may perhaps account for some of the coefficients which have been found.'

Dr. G. M. Morant who was one of the earliest to use the coefficient of racial likeness in anthropometry, points out the limitations of the C.R.L. method in the following words: "It is not a true measure of absolute divergence and must not for a moment be considered as such. When it is said that a low coefficient between two races A and B indicates a closer relationship than a high coefficient between A and C, what is meant always is that it is more probable that A and B are random samples from the same population than that A and C are (*Biometrika*, 1923, XIV, 193-264)." Without therefore claiming any finality on this question I am presenting my results for what they are worth.

If we take 1—3 ■ intimate association, 3—9 ■ association and above ■ as divergence (?), then we find that the Hill Marias have affiliation with Bhatras, Parjas, Dandami Marias, Nawagharia Gonds, Gadabas, Murias of Narayanpur, but less affiliation with Murias of Kondagaon, Halbas and Dhakars. On the other hand, the Dhakars are affiliated to the Muria of Narayanpur, Gadabas, Dandami Marias, Nawagharia Gonds and Halbas, while they are less associated with Hill Marias, Murias of Kondagaon, Parjas and Bhatras. The relation between Dhakars and Halbas are very intimate. It may be suggested that the interrelation between the various cultural groups in Bastar indicate an ethnic miscegenation, and groups speaking the ■■■ or allied languages are more intimately related than those speaking different tongues. The Murias of Kondagaon, however, present a difficulty and probably they are more mixed than the other groups. Leaving aside the statistical data I am only giving the tables of crude and reduced coefficients of likeness between ten groups already mentioned.

A comparison of the standard deviations of the large number of absolute physical characters measured by me does not, however, indicate any great intermixture in Bastar, for the standard deviations in the case of those groups which are known to have freely mixed with tribal elements are not appreciably higher than those we get for comparatively purer or even homogeneous groups. In most of the characters, the Halbas show the highest standard deviations while the Parjas come next to the Halbas. This is expected

■ both the Halbas and Parjas are recruited from various tribes and castes and they represent only cultural patterns and not ethnic groups. Of the sixteen absolute characters measured from 10 cultural groups in Bastar, the Parjas show the highest standard deviations for six characters, and the Halbas for 5, while in the rest of the characters the Halbas and the Parjas share the second position in the list. While these data prove the greater variability of the Halbas and Parjas, it does not necessarily mean that the other groups are less mixed than the former, for the standard deviations for anthropometric characters from mixed groups become high or low in accordance with the nature of the blend. Thus J. C. Trevor who was my colleague at the Galton Laboratory in 1937 has been investigating into the social and biological effects of race-crossing and have collected anthropometric data of a number of series representative of living groups of mixed descent from various parts of the world, finds that in every case for characters which clearly distinguish the two presumed parent populations, the average measurements of the one derived from them are intermediate in value. 'As far as can be ascertained,' writes Trevor, 'from the best evidence available, the cross results in a nearly perfect blending of average values, determined by the proportions in which the parent populations have mixed.' These results are not perhaps genetically surprising if the parent populations are themselves highly heterozygous and variable. The variabilities of the crossed series, therefore, are not necessarily greater than those of the parent populations and if we pin our faith on the

variability alone, to determine the purity or homogeneity of the samples, it will give us results which cannot be otherwise substantiated.

Cultural Groups.

The Dhakars are regarded as the highest in the social scale and are the reputed descendants of Kshatriyas who followed the ruling family to Bastar. They have taken to indigenous or tribal women and today there are various types of features discernible among them. The custom of 'Ghaita Pani' or family rehabilitation which was practised till recently but has now been abandoned, affords evidence of the anxiety of the ruling family to augment the number of the higher social groups in the State. Considering the small proportion of the immigrant population in the State and the desirability of increasing their number, the chiefs introduced a scheme of auction of widows in the State. As it always happens when an invading group comes and settles among the invaded, the difficulty of procuring wives becomes indeed great and where the indigenous women belong to the wild and savage tribes, this difficulty assumes a magnitude which cannot be effectively solved. Not content with making widow re-marriage popular among the higher castes, the Raja began to send out emissaries to discover where widows or divorced women of the four higher castes existed. These women were summoned to the headquarters of the *Tehsil* where they lived and were put up to the highest bidder care being taken to see that the buyer was of the same caste, though not invariably, as the women sold. Levirate

was allowed and if the widow's brother-in-law wanted to keep her, he could do so by paying a small consideration to the Raja but otherwise the latter arrogated to himself the complete right to dispose of her to the highest bidder. In some cases, however, it was found that angry husbands used to approach the Raja requesting him to intervene in their domestic arrangement and wives who misbehaved or were guilty of sexual lapses were put to auction and sold as widows.

Next to Dhakars, the Halbas appear to be culturally a dominant group as the language of the State is Halbi and the supposed military antecedents of the Halbas give them an importance which is reflected in their attitude to the other social groups. True to the traditions of warlike people they have taken to women from the tribal groups and have not yet formed a *Jus connubii* so that their ranks are still open to outsiders. The example of the Dhakars has perhaps some lesson for them and thus the intermixture of groups has not been tabooed by caste prescriptions. The distribution of Halbas in Bastar shows that these people are scattered in the fertile tracts irrespective of the fact that they are surrounded by Murias, Marias and other tribal groups. In many places they form a top-dressing, as it were, on a solid tribal base. This has made it possible for the Murias and Marias to adopt many of their alien traits while the Halbas themselves have conformed consciously or unconsciously to the prevailing tribal pattern of culture. In Narayanpur, the few families of Halbas have met and in other villages, viz. Chindhamar, Badaingee, Takraguda, Gumtupal, Keragosa

where we measured the Halbas, the difference between them and the Murias, Marias, Dhruvas and Gadabas appeared to be indicated only in dress and slightly in material culture. In the matters of beliefs and practices pertaining to their social and religious life the Halbas still show the same superstitious regard for sorcery, witchcraft, fetishes, *etc.* and protect their persons against possible dangers by resorting to herbs and samples with powerful charms muttered into them by skilful votaries of dreaded spirits believed to interfere with human life by their agile and nefarious ways. The Halba therefore, is not a distinct cultural group in Bastar; the designation does only mean the dominant cultural pattern which is an open one, and which is very much built up on an aboriginal foundation. The worship of Log-gods by the Halbas appears to be in conformity with the customs of the wilder tribes of the area. The complex cult of the Mother-goddess which has reached a stage of high elaboration among them and the segregation of menstruating women indicate, however, a reciprocal cultural relationship with the indigenous tribal population.

Except the Marias of Abujmar hills, all the other tribal groups are coming together as sharers of a common cultural existence. The Murias of Narayanpur are believed by some to have been originally Marias of Abujmar, but have settled down in the plains thereby abandoning much of their original traits unnecessary to their existence as plainsmen. There is, however, greater cultural similarity between the Murias of Narayanpur and the Marias of Abujmar than between the latter and the Murias of Kondagaon whom Grigson refers to as "Gotal" Murias.

The Māriās of Abujmār appear to be the wildest tribe in Bastar who still roam about in the dense forests and forage for food without much of an interference from the State. They have not yet entered the social economy or adopted the prevailing cultural pattern of Bastar. Those of them who have wandered into the plains and have settled down as permanent or semi-permanent cultivators are called Dandami Māriās or Bison-head Māriās on account of their characteristic head-dress which is of bison horns made into a spectacular head-gear used in dancing. This, however, may represent a totemic symbol though its origin is forgotten to-day.

The Hill Māriās put on next to nothing on their person except strings of beads round the waist. The men go about almost naked with a piece of rag just enough to cover the private parts but their handsome physique, well-proportioned features, and gay disposition make them extremely attractive which compensates for their often disgusting nudity. The women wear fringed or unfringed narrow cloth round their loins but do not cover the portion from waist upwards. The neck is covered with many rows of beads and metal necklaces most of which are locally made or ■ bought from the weekly markets. The pieces of cloth or rag with which the women cover their loins are woven by themselves on primitive looms, the yarns ■ made partly from fibres of jungle shrubs and partly from cotton. Recently, however, these rags of indigenous make are being fast replaced by small pieces of cloth which they buy from distant markets, ■ from itinerant traders who dare risk their lives to

get into the Māriā country. Even today the Māriās and Daudamis are infamous for homicidal proclivities and the large number of murders on flimsy pretexts make them otherwise notorious tribes in Bastar. The connection between these murders and magico-religious beliefs has not been definitely established, but considering the method of disposal of the sacrificed animals and the popular stories so widely current in the neighbourhood it cannot be safely asserted that there is no connection between their homicidal tendencies and their magical beliefs regarding the importance of the head of the human victim and the blood that gushes forth, to the cause of their prosperity in the fields and their success in the forests. The vernal sowing festival of the Māriās affords evidence of the magico-religious significance of sacrifices for during the accompanying hunt, the shedding of blood of the animals slain is taken as a very good omen, because it is believed to predict a rich and bumper crop. The midnight sacrifice of hen or pigs by the *Perma* is extremely significant for it is then that each family hands over a packet containing seeds to the *Perma* who piles them in front of him on the ground. Then he pours the blood of the sacrificed animal on the packets to soak them well with blood. This packet of seeds is mixed with other seeds at the time of sowing and the efficacy of this process is seldom questioned by the Māriās.

The Muriās whether of Kondagaon or of Narayanpur appear to be plains Māriās for they possess almost all the traits that form the culture pattern of the

Māṛiās. Some of the more important traits have undergone significant modifications which must have been due to changed economic environment, for the country of the Muṛiās is situated on the plains — also on the plateau and intercommunication between the various sections of the Muṛiās is more feasible than between the Māṛiās and Muṛiās. The difference the Māṛiās who have settle in the plains and Māṛiās who still dwell in their mountain asylum is greater today than between the Muṛiās who live on the plains and those living on the high plateau. For example, the Kondagaon Muṛiās or Gotul Muṛiās do not differ fundamentally from the Narayanpur Muṛiās whom Glasfurd called 'Jhooriyas' and Grigson 'Jhoria' Muṛiās. The Muṛiās of Kondagaon possess — important institution locally known as 'Gotul Guree' which has suggested the name 'Gotul' Muṛiās to Grigson but the Muṛiās everywhere possess an elaborate 'Gotul' or dormitory organization and partake of the same cultural pattern.

The Dhruvas form another cultural group in Bastar who are vaguely known as Parjas, a generic name which includes a number of small groups speaking Oṛiyā but originally belonging to — or other of the tribal groups living in Bastar and the neighbouring areas. Thus there are Khondi Parjas, speaking Khondi and Oṛiyā, Gadaba Parjas who speak Gadaba and Oṛiyā both, Koya Parjas who are the same as Māṛiās and Dur Parjas who speak Oṛiyā. Adoption by — tribe or — section of it of the dialect of a superior cultural group widens the social distance between it and its congeners till it leads to complete dissociation

of the group from the parent body. With adoption of the traits of the higher culture-groups their claim to higher social status gets the seal of public approval and ambitious members of the tribe gradually drift to the new order and merge into it. Even now, these Parja groups can be readily identified by their physical features with the original tribes they are recruited from, but cultural differences have assumed serious proportions in some cases though the configuration of their cultural life has not been much disturbed.

Many of the customs and practices of the higher cultural groups whose language they speak now have been assimilated by the Dhravas but their own beliefs and practices have not been abandoned though sometimes they are found in an attenuated form. Thus no longer do we find the marriageable girls of the village confined in the underground cell where young men desirous of matrimony were to join them at night and make their choice. Carefully careless they would leave their brass bracelets with girls of their choice, so that next morning the parents of the girls concerned could identify the Romeos of the village. But even now, the girls of the village gather together under some improvised leafy hut at the outskirts of the village for a few weeks before the Dusserah and young men of the village or those from neighbouring villages frequent the hut, dance, sing and woo their sweethearts till exchanges of gifts take place and the union is talked about in the village. This choice is then implemented by the parents of the young man who carry pots of liquor and rice to the house of the bride who has the option of receiving or refusing them.

In the latter case the gifts are doubled and negotiations take definite shape.

Though premarital licence is freely admitted by the Dhravas, girls after marriage have to behave; and fidelity of married life is very much prized by the society. If the girl is expected to be faithful to her husband, the latter also has to pass a test of fidelity. In earlier days, however, before the relatives on either side, the girl would take a hot brand and apply it to the boy's posteriors. If the boy cried or shrieked in pain, he was considered no good and was dropped like hot coal. In one of the marriage functions among the Dhravas, we noticed how this custom had taken a more complex form. The girl was seen to walk round the boy with other girls of the village at her heels and after three such rounds pushed the burning end of the brand into the ground thus partially extinguishing the fire. She then lifted it up to apply gently to the posteriors of the boy. The bridegroom started but did not yell, jumped but did not complain and the gay crowd watched the ordeal with intense excitement. The explanation of this custom was naive no doubt but natural — contact with their neighbours, the high-caste groups, has taught them the ways of the latter. The fire was meant as they explained to — to protect the young man from enemies of all kinds and to dispel fear of the spirits — well as of the wild animals of the forest, to protect the crops and vouch perpetual fidelity of the couple.

The Bhatras are a little higher in social scale than the Parjas. They have a few sub-groups which claim distinct social status as a result of Hinduization. The

Hinduized Bhatras put on sacred threads and consider those who still adhere to tribal prescriptions as inferior and thus have already closed their ranks to other tribes and groups. Today Bhatras who still intermarry with other groups have distinctly lower social status. The Bhatras and Parjas live by permanent cultivation and even where they live near the forests, they seldom practise shifting cultivation like Mārīās. But they appear to have profited by their experience in earlier days for they bring the undergrowth from the forests and burn them in their extensive rice fields. The Bhatras are either Parjas socially advanced through their contact with the Hindus or they belonged originally to the same stock as the Parjas but have immigrated into Bastar later than the Parjas. Grigson refers to the fact that Parjas are priests of the 'Gāoṣi Devī' or village mother in Bhatra villages and concludes as follows: 'The indication is that the Parja is the original settler displaced later by Bhatras'; he further says, that 'the ceremonies preceding the great Pargana ceremonial hunts through the jungles near Darba at the head of the pass descending from the Jagdalpur plateau into Sukma, though most of the villages attending are Bison-horn Mārīa villages, the Pūjāris who officiate at the altar of bows and arrows are Parjas.' Wherever there are two or more successive waves of immigration, if the patterns of culture are the same or even allied, cultural miscegenation is likely to follow and thus the knowledge of the local spirits and godlings possessed by the original settlers is taken advantage of by subsequent immigrant groups and it is therefore no wonder that the

Parjās still supply the priests to other cultural groups of the area, for they are usually better versed in the spirit-lore — well as in the methods that could establish harmonious relations between habitat, economy and society.

General Economic Life of the Cultural Groups.

Most of the tribal villages in Bastar are self-sufficient. There is usually a family of black-smith in the village, or several villages may have one such artisan who supplies the small needs of the people. The artisan elements in the population of these villages do not — to have a separate origin. They are perhaps recruited from the tribal substratum. For example, some Murā who — skilled in iron-smelting and was adept in making iron implements may have been allowed to ply the trade of iron-smith, and his descendants have taken to this occupation and thence the functional group has come to be known — iron-smiths. The iron-smiths in the Murā country not only possess similar physical features but speak Murā, possess the same clan names as the Murās and even intermarry with them. Similarly among many other tribes of the locality the artisan elements owe their origin to the tribal stock and still have kept their ranks open. Among the Saoras who are widely scattered in the Ganjam Agency Tracts and the Vizagapatam district of the Madras Presidency there are a few occupational groups such as the 'Arisis' who weave cloths for the tribe, the Kundals who make baskets and the Lohars who are iron-smiths. All these are Saoras by origin and still marry in the tribe, though from the cultural

point of view, they resemble the artisan elements in other parts of the country. Some of these groups have, however, become independent and although there is no theoretical bar to marriage outside, they usually confine marital relations within their group. This, however, suggest a plausible solution of the origin of caste. The caste system in its present form may be a post-Aryan development, but its essential characteristics which favoured its growth and persistence were most probably of tribal origin. The Kurukhs, and Kewats or Dhimar who live by fishing in Bastar afford examples on this point.

The Kurukhs of Chitrakot are physically akin to the Mārjās; even trained eyes will not be able to detect any difference in their make up. Even now Kurukhs marry non-Kurukhs and the wild Mārjā girls may take the Kurukhs as their spouses. All tribes and groups in Bastar take to fishing as a diversion but its adoption as a permanent occupation by the Kurukhs and their use of rod and line in fishing and their divorce from land have widened the social distance of the latter from the Mārjās from whom they are evidently recruited. Yet these Kurukhs are indispensable to the social economy of the Mārjā country as they barter their catch in rivers and tanks for grain at customary rates.

The same may be said about the Rawats of Bastar. They are found scattered all over the country and their occupation is tending cattle of the people. They are usually paid in kind by the people but they also sell milk and its produce to travellers and administrative officers who may need the same. Rawats appear to

be recruited from the tribal population, for there is hardly any difference between them and the population they serve. In the interior of the Māriā country and elsewhere, where the population is purely aboriginal, the need of domestic servants for travellers and administrative officers of the State must have been felt and a particular family was selected and granted the privilege of wearing the sacred thread by the State so that it could be of use to the visitors. A clean caste was created among the unclean aborigines and to-day they attend all villages where there is a Paik-guree if previous information is sent to them. Grigson has also pointed out that a large number of the persons returned members of the Hindu functional castes, the graziers, potters, fishermen, weavers, blacksmiths and others, are in reality members of the primitive tribes speaking their language and only differentiated from them by their occupation. There is nothing in their appearance to distinguish these persons from other aboriginals; they follow their tribal religions whether enumerated as such or as Hindus.

A comparison of differences of means and standard deviations in terms of their standard errors, of two series of measurements on the Kurukhs and Hill Māriās indicate very little divergence between the two samples. In comparing constants, a difference greater than two times its standard error has been considered significant. The constants for the means of 16 absolute characters when compared give all values less than 2 except in the case of one nasal measurement, viz., nasal height which is 2' 03. The nasal height is a very delicate measurement and such

small difference in value may be ignored. In standard deviation also except for the nasal breadth (2' 26) and nasal height (2' 9) all the other characters do not show any significant difference. The standard deviation for nasal height among the Kurukhs is higher than that of the Māriās for the same character showing a greater variability perhaps. But considering all the characters it appears that for all practical purposes the two samples (the Māriās and Kurukhs) may be taken to represent the same population. The cephalic index of the Hill Māriās is 74' 2, nasal index 88' 0, and stature 162' 06, while corresponding figures for the Kurukhs are 74' 5, 82' 4 and 161' 54 respectively. All these point to an ethnic similarity which has been already referred to as suggested by a study of indefinite characters of the two populations. The result, however, should be interpreted as extremely important as such comparisons may lead to the identity of tribal groups with castes thereby explaining the transition of tribes into castes.

The material culture of the people of Bastar is very simple indeed, and in spite of the cultural miscegenation we have mentioned above, the wants of the people are not varied. The usual tools and implements made by the local smiths are the plough-share, axe-blades, arrow-blades, etc. while the plough and wooden basins for the ■■■ well as bows and arrows are made by the people themselves. The ornaments which women wear ■■■ not locally made. Some of the bead necklaces ■■■ imported stuff and even the armlets and rings are brought by itinerant vendors or are procured from the local weekly markets. Beads and

cowrie shells are also locally woven into necklaces and often these are coloured from indigenous dyes by the women. Aluminium ornaments are of recent origin and are not made by the local artisans. Various kinds of ear-rings are used, many of which are of Japanese or German make, but the indigenous method of dilating the lobes of the ear has not fallen into desuetude. In the interior various forms of tattooing are still found and though it is difficult to trace any relation between the types of tattooing, on the one hand, and totemism and other social practices, on the other hand, the belief in their efficacy is not questioned by the *Mariās* and *Muriās*. The *Halbas* and *Dhakars* do not tattoo themselves but all other tribal groups take to some form of tattooing. The hair is tastefully decorated and white bamboo combs are used by women to make the coiffure look extremely pretty and attractive. Half a dozen or more combs usually of indigenous make, are put in rows on the coiffure and are very much prized by the girls, as they usually presents from young men of the *Gotul* (dormitory) who are their admirers. These combs have a special fascination for a girl till she chooses to settle down as wife, when she has to content herself with the one which was presented to her by her lover and husband. As soon as the girls leave the *Gotul* permanently—and this happens on marriage—there is a waning of interest in the matter of dress and decoration, and youth gradually drops its charm and attractiveness and surrenders to the exacting rôle of maternity and motherhood.

There is no industry worth the name in the State, the principal occupation of the people being agricul-

ture and lumbering. The wild tribes are still accustomed to their nomadic life in the forests and supplement their gleanings there by crude cultivation. The usual method of cultivation is the *Dippa* which is the common form of agriculture practised all over the world wherever virgin forests abound. A piece of land is selected for the purpose, the trees are felled and the clearings are then set fire to. When the field is thus ready they dig holes and sow all kinds of seeds together or use very small or miniature ploughs for scratching the field and sow seeds broadcast. Sacrifices are then offered to the Mother-goddess and other godlings of the forest and also to the spirits of their ancestors; dances are held in their honour; and when all these rites are done and none is omitted, they expect a bumper crop. Before the seeds are dug in or sown in the usual way, some of these are ceremonially dedicated to the Mother-goddess who is also the goddess of corn, and the blood of the sacrificed animals is poured on the packet of seeds so as to soak it and to fecundate it as it were. On the forest-clad slopes of hills whose declivity is not too steep for agriculture, *Penda* or terrace farming is practised. The method of cultivation is similar in both the cases, the fields in either case have to be left fallow for two to three years after every year of cultivation so that fresh growth of vegetation may be possible. Where water is available, arrangements are made to irrigate the fields by channelling water from higher levels, or more commonly the moisture of the soil is maintained by placing logs of wood or stones in such a way as not to allow the water from precipitation to run to waste.

Even then sacrifices are to be offered, dances have to be danced and the necessary vigil has to be kept during certain critical stages in the growth of the plants, particularly when the crops ripen and the harvesting is on.

In areas where permanent clearings have been made the agricultural practices conform to the usual type met with in other parts of the country, though adequate arrangements for irrigation and manuring do not exist. Where knowledge of agricultural practices has been diffused and greater security of crops has resulted, the same incentive to sacrifices or magical practices does not exist and the elaborate rites and practices of the wild tribes have been replaced by thanksgiving services, such as is provided on the occasion of the ceremonial partaking of the new crop. But security of food-supply has brought in more leisure and a multiplication of wants born of a new philosophy of life, so that wants that are unknown among the wilder groups have become real with consequent efforts to satisfy them. But insatiate wants like unfulfilled wishes have produced a social discontent. Competition though not so acute as yet, has replaced custom in some form and hunger of a few families for more land has ousted others from the moorings of their fields. On the other hand social and ceremonial needs have driven many to the arms of higher castes who have manoeuvred to retain the services of these landless families to meet the increasing needs of farm labour.

When an aboriginal faces a need for cash either to meet the expenses of ceremonial marriage or to meet

the obligations of the bride to her maternal uncle whose son should have been the legitimate claimant to the former's land and who therefore should be compensated or when he is in need of money to pay ■■■ fine to the State or the village Panchayat and cannot raise it by selling the holding which is inalienable or by disposing of his personal belongings which are few, he takes a loan from the master under whom he might be working and agrees to repay it in the form of agricultural service. In days when the aboriginals lived in compact areas and the tribal organization was integrated and strong, individual requirements like these were met by voluntary subscription as, among certain tribes of Chota Nagpur even today, bride-price payable in cattle is raised by subscription from among the members of the clan or the village concerned.

With the settlement of higher social groups in the neighbourhood individual members of aboriginal tribes have come in contact with the former either ■■ suppliers of flowers or of small handicrafts of their own, or as drummers, labourers and bearers of palanquins. While tribal solidarity has suffered disintegration owing to the possibility of existence independent of the village community, the dependence of the individual families divorced from tribal occupations has been real ■■ that their economic helplessness has become a source of their exploitation by the caste people. The innate ideas of obligation and honesty, which these people have, make it impossible for them to leave the master's service, so long as they have not liquidated the debt and this very often means lifelong servitude. When the debt remains unpaid

and the man dies, his son has to take up the burden of debt on his shoulders and continue as a *Kabadi* or lifelong servant in the master's family. The master very often pays a further advance towards the latter's marriage and thus the debts increase so that for generations the *Kabadi's* future and that of his descendants is mortgaged. Iniquitous terms imposed upon the *Kabadi* by his master and even continued ill-treatment and under-nourishment have not provoked any protest from the former who is wont to accept his lot with philosophic quietude so long as he does not receive a certain remuneration which is expected to keep the *Kabadi* and his family out of starvation. The rate of remuneration varies in different Tahsils of the State. Besides the *Kabadi* there are in Bastar various kinds of servants whose relations with their employers vary according to the demand of agricultural labour and the customary rules prescribing their remuneration and conditions of service. There are the farm servants, for example, in Kondagaon and Bijapur Tahsils,—farm servants who do not take any advance from the master. In Bijapur, a small advance of Rs.3 to Rs.4 is taken, with promise to work for the agricultural year. Usually the servant gets a remuneration of Rs.4 to Rs.6 per year, 1 *pailla* of *dhan* or 1 *sote* of rice, salt, chillies and tobacco daily and also one or two annas in cash for liquor on each festive occasion and two pieces of cloth worth Rs.1-8 in winter. In Konta Tahsil where the *Jwari* crop prevails, there is no such system of employing servants, those who are without land often help those who have, the latter paying them some remuneration at the time of harvesting. The

Pet-Posa system which provides a relative or relatives in distress, allows the latter to live permanently in the house of a man, without any agreement as to service to be rendered or remuneration to be paid, and help the family in all its economic activities.

The *Kabadi* system, however, is mostly met with in settled areas and is less prevalent in areas where the aborigines live in compact groups or where the alien settlers have not penetrated much. The usual remuneration of a *Kabadi*, though subject to variation in different *Tahsils*, is as follows; 12 *khandis* of *dhan* per year, 6 *khandis* of *Dandi mudi* at the time of threshing and reaping, 6 *khandis* of *Kotar dhan* at the end of the harvest, cash remuneration of Rs.2 per annum, clothes Rs. 1-8, salt, etc. for about 8as. and food at odd times. If all these are regularly paid it comes to Rs.2 per month on the basis of prices prevailing now, but as everything depends on the sweet will and pleasure of the master concerned, the situation sometimes degenerates into ruthless exploitation by the employers concerned. The *Kabadi* has to live in small outhouses within the compound of his master's house and should be within hearing distance from the family quarters.

Vigorous attempts have been made from time to time, and are being made by the present administration to eradicate the evils of the *Kabadi* system and it is expected to be declared illegal in Bastar this year. But it is at best doubtful if the general release of the *Kabadis* as contemplated in the state circular of 1st August, 1933,

will solve the problem of the *Kabadis*, for aggressive serfdom in some form or other is bound to remain where the possibilities of independent existence are limited. As land is available in plenty and the State is not callous to their interests gradual settlement of these *Kabadis* — new lands will be possible but the *Kabadi* system shows how different social units living in the same cultural environment develop a relation of interdependence so much so that the existence of one group without the co-operation of the other is threatened and often end in maladaptation.

An Indigenous Cultural Institution.

Of all the interesting social institutions among the people of Bastar, that of Gatal or dormitory is the foremost as it is the pivot of social life where it is found and has even obscured the indigenous tribal and clan organization. The dormitory institution is found widely scattered among primitive peoples. It is met with among most of the aboriginal tribes of the Chota-Nagpur Plateau, viz. among the Mundas, including Tamarias, Hos, Oraons, Birhors, among the tribes of the Central Provinces, among the Bhuiyas, among the Saeras of the Ganjam agency tracts, among most of the Naga tribes of Assam such as the Aos, the Semas, the Angamis, the Changs, the Lhotas, and the Konyak Nagas the Kukis and some of the tribes of Indonesia. The Mundas and Hos call it 'Gati-ora,' the Oraons call it 'Jonk-erpa', the Bhuiyas 'Dhangarbasa', the Gonds know it

by the term 'Gotalguree', the Aos and the Semas call it 'Morung', the Memis have two names for it—the boys' dormitory being known as 'lkhuichi', while the girls' ■ 'Iloichi'; and the Angami call it 'Kichuki'. All young bachelors of a Mūṇḍā village or *tola* (hamlet) have a fixed common dormitory in the house of a Mūṇḍā neighbour who may have a hut to spare for the purpose. Likewise the girls of a village sleep together in the house of a childless old Mūṇḍā couple or in the house of a Mūṇḍā widow. The girls are taken care of by an elderly matron of the village who exercises a general supervision over their morals. The bachelors of an Orāoñ village must sleep together during night in the *dhumkuria* which is generally situated on the outskirts of the village. There is also a separate house for the girls where the latter pass the night under the guardianship of an elderly duenna. In case a house is not available for the purpose, the girls are distributed among the houses of widows. The Hos also possess two houses, one for the unmarried boys and the other for the maidens of the village. But in many villages, the custom is to distribute the girls among the houses of widows.

Many Gond villages in Chattisgarh and the feudatory states have a large house near the village where unmarried youth and maidens collect and dance and sing together at night. Some villages possess two, one for the boys and one

for the girls. The Bhtiyās have the same system as the Oraōñs. The bachelors of the village sleep in one large house. Col Daiton mentioned some villages having a house for maidens which they occupied without any elderly matron to look after them. The unmarried girls of the Aos sleep in small houses built for the purpose in twos and threes and the unmarried men sleep with them. Among the Lhotas, every Khel (division of a tribe) possesses one common bachelors' house or *Morung* and many of their customs and practices are associated with it. 'It is the sleeping place of every Lhota boy from the time he puts first his dao-holder till he marries, the rule being only relaxed in the case of boys who are allowed to remain at home and nurse ailing and widowed mother, or when the house is no longer habitable.'

Among the Angami Nagas, however, the *Morung* is not always resorted to by the bachelors but is used on occasions of ceremonies and 'gen-nas'. In some Memi villages the girls share the same dormitory with the young men. The boys sleep on an upper platform, the girls on a lower. The Mupias and Marias of Bastar possess sleeping barracks outside the village, where boys and girls meet nightly to play and dance and sing till they fall asleep. The Marias have a *Gotul* in every village but the boys and girls do not always share the same house as among the Mupias of Kondagaon. The *Gotul* institution appears to have developed to perfection in certain

Murja village where it has effectively superseded the tribal or clan organization. In the Murja Gotul the boys and girls who share the Gotul are not all of the same clan; unions of boys and girls when they develop into permanent friendship may end in marriage if necessary. This is possible because both among the Murjas of Narayanpur and those of Kondagaon, among whom the institution is very highly developed, the villages are not scattered like those of the hill Murjas and several clans share the same village or different wards of the same village. Originally the Gotul ■ ■ ■ communal village-dormitory used mainly by bachelors but at times by all the males of the village, and used also as ■ men's club.

The officers of the Gotul are many and their duties varied. The names of the officers are sometimes borrowed from the title of Zemindari servants. In Padalibhum, the head boy of the dormitory is always known as the *Leyur Gaita* and below him the Gotul officers are the *Leyur Majhi*, the *Jaliarsi*, the *Laharu*, the *Baidar* and the *Kamdar* (cf. Grigson, *The Murja Gonds of Bastar*). The head officials of the Gotul in Narayanpur are as follows: *Salam*, *Baidur Siladar* and *Kotwar*. The *Salam* is the chief of the Gotul. He is responsible to the elders of the tribe or village for all that happens in the Gotul. He orders dances and determines the dates and times of social function and controls the other office-bearers of the Gotul. The *Baidhar* looks after the collection of fuel, cleaning and sweeping of the Gotul-guree. The

Siladar is responsible for the attendance at the Gotul ; he has to keep the inmates of Gotul informed about the programme in the Gotul and to report about their behaviour to the Salam. The Kotwar does the work of bailiff and has to call the members both male and female whenever any Gotul functions are ordered by the Salam. The Salam has certain definite privileges allowed by custom, as, for example, he can love a particular girl and declare it in public. The girl of his choice enjoys certain privileges which are denied to other girls. So long as the Gotul is informed of his choice, no male member of the Gotul has a right to approach her or make love to her. The Salam has also the further privilege of having as many girls as he desires to keep about him. So long as the chief of the Gotul does not marry he remains in sole charge of the Gotul institution but after his marriage, a new Salam is elected. The election of course must be unanimous. A Gotul member after marriage is not welcome in the Gotul. There is, however, no tribal law forbidding the entry of a married man into the Gotul-guree or his participation in Gotul life. The chief of the Gotul can only request him not to frequent the Gotul but in case the latter does not abandon his intentions, the Gotul brotherhood can only take recourse to certain conventional methods which ultimately bring about the desired effect. First, some member of the Gotul will be deputed to steal a fowl from his house, then a second one, and then a third and so on till all the birds stolen from his pen and

eaten up by the Gotul brotherhood. If that is not enough, pigs, sheep and even cattle will share similar fate till depleted resources lead to domestic quarrels between husband and wife — that either he has to sever his connection with the Gotul or face divorce proceedings before the tribal council.

While married people are not allowed in the Gotulguree, special consideration is shown to widows and widowers who want to share the Gotul, for there are no restrictions against such persons; and in one Gotul—that of Narayanpur—the Salam was actually a widower, who confided to me that he had no intention of marrying again. The position and prestige of the Gotul girls are determined by the age and importance of their associates, but the Salam's mate wields considerable authority over all inmates of the Gotul; and certain powers and privileges are often exercised by other girls according to seniority and also according to their influence with the Gotul officials.

The unions of Gotul mates — well as those between Gotul boys and non-Gotul girls or *vice versa*, are not regarded as complete unless the couple after marriage spends a night with the Gotul boys' fraternity. It is on this occasion that the Gotul ceremonially mourns the loss of these Gotul companions and formally acknowledges the transfer of loyalty of the newly married couple from the Gotul to the village which henceforward claims their undivided allegiance. This night generally witnesses a battle of wits between the Gotul

fraternity and the village represented by married couples, in which the married or the mature group is subjected to various criticisms for acts of omission and commission.

The Gotul organization has a tremendous effect on the social life of the tribes concerned. It is not only a club where the two sexes co-operate to direct their energies through productive channels, but it is here that the necessary training for the duties of tribal manhood are inculcated through a system which has the sanction of traditional experience. Training in discipline is an important feature of Gotul organization wherever it exists. Thus among the Oraons of Chota-Nagpur there is a regular system of fagging in the dormitory. The smaller boys serve the bigger ones, shampoo their limbs, comb their hair and so on and are subjected to severe discipline to make men of them. Where the boys and girls share the same dormitory as among the Murias of Bastar, the part of the small boys is played by the girls. As soon as the girls enter the Gotulguree after supper,—and they have to attend regularly every evening,—they are to bow to the Gotul chief after which the girls attend to the boys, comb their hair and massage their hands and arms to refresh them. They then sing and dance together till late at night when they get tired and return to their homes chaperoned by their friends.

Where the Gotul organization is perfect as among the Murias, it is more or less indepen-

dent of tribal control and the assistance of the Gotul can be had by the village on payment of certain fees, agreed upon mutually between the Gotul chief and villagers in need of such assistance. In case the headman of the village needs the services of the Gotul boys, the chief of the Gotul is called on for help and this of course is ungrudgingly given, but individual villagers must pay for their services. Among the Marias where the Gotul is not ■ elaborately organized, the Gotul boys are only fed by the families who may require their services and no wages is paid for their labour. Tribal life in India ■ elsewhere is characterized by the absence of a hierarchy of economic organization. Absence of ■ well-assessed division of labour in primitive society does not favour the development of hereditary skill or technique which leads to the formation of artisan classes or guilds, so that spontaneous co-operation in domestic and economic life becomes essential. The dormitory house therefore affords the training ground for educating the children of the village in all matters relating to social and economic life of the tribe, so that they may participate in all activities of social or economic order.

Life in the dormitories is difficult to depict, for the risks involved in such inquiry and the jealousy with which the inmates guard the secrets of dormitory life make it sometimes physically impossible to know much about it. The dormitory house is usually situated in the heart of the

jungle among the wild tribes or away from the village as in Bastar, so that except the inquisitive investigator, no stranger may stumble into it. It is purposely kept closed on all sides with only a small hole serving as a door through which one can just crawl in and out. The inside of the room is dark or filled with smoke most of the time the room is in use, and little is visible from outside. Besides, the dormitory fraternity are under the severest penalties bound down to secrecy in regard to all that passes in their dormitory and even girls are punished if they dare tell tales. They are not allowed to join in the dances till the offence is condoned and it is the severest punishment that can be imagined by a girl. The girls will withdraw as soon as questions regarding their dormitory life are put to them. In most of these dormitories, publicity of any kind by the inmates is an efficient bar to participation in the nightly programmes. The social solidarity found in the dormitories reflects to a great extent the tribal life, as a whole; and this perhaps accounts for the spontaneous discipline that characterizes the conduct of primitive life.

In his account of the dormitory life among the Murias and Marias of Bastar (*vide* Grigson, *Maria Gonds of Bastar*, Oxford University Press), Grigson writes as follows:—"Boys and girls of an age to visit the Gotul dormitories are known as Leyur and Leyas respectively. All the boys assemble at the dormitory in the evening for dancing, games and social and sexual training,

sleeping on there after the departure of the girls to their homes late in the night. The girls attend at the dormitory in the evening, each girl being paired off with a boy of an 'Akomana' clan. The girls have to comb their boy's hair and massage their arms and legs, to dance with them and to be initiated into the mysteries of sex by them. Marriage frequently follows these dormitory unions but by no means always does."

Our investigations show that the mating of of boys and girls in the dormitory is not so deliberately done as is described by Grigson. We discussed with the members of various dormitories in Kondagaon and Narayanpur, if the girls have to attach themselves to particular boys in the Gotul and whether the Gotul chief has to see that this mating is between persons of 'Akomana' clans, marriage with whom, if necessary, is not barred by the rules of clan exogamy. We were told that such arrangement was not possible as the strength of the two sexes depends on the resources of the village. Any such convention would be a serious infringement of personal liberty and would militate against the prevailing practice which allows sufficient latitude to the sexes to select their partners in life. On the other hand, we were told that it is the unwritten code of conduct in the Gotul for a girl not to bestow her favours in public to any individual for that would be coupling her name with some boy who may not be ultimately her partner in life. But

this does not mean that the girls do not have their sweethearts: there is not a single girl whose eyes are not fixed on one or more of her acquaintances of the other sex, but she generally conducts herself in such a way that no other member of the Gotul gets an inkling of her intentions during the early overtures. This is why every evening a girl usually selects a new friend, massages him, combs his hair, and looks to his comforts. Even if she remains with the friend of her choice, she does not grudge doing odd bits for other boys who may need her assistance, so that no suspicion may arise about her choice.

Lessons in the various agricultural operations, in hunting, in honey-gathering and other minor economic pursuits imparted in these Gotuls through mimetic dances depicting them, while ideas about the sanctity of tribal discipline, social approbation, social justice, reciprocity of obligations, law and order in society, as well as relation between efforts and rewards, between crime and punishment, are inculcated through stories and anecdotes which graphically describe individual doings and their repercussions on the social life of the community. Sex training is regarded as an indispensable discipline in dormitory life and various methods are adopted to give the inmates a knowledge of men and sex practices. The central post of the Oraon dormitory which serves as the trunk bearing the alit for sexual exercise is not met with in the Muria Gotula but the same objective is achieved by mimicking sex acts or by appropriate songs

and rhythmic movements of limbs during dances and through anecdotes describing the methods and processes of the sex act and its importance to tribal life and conduct. The sexual act, however, is not taboo in the Gotul and does take place under cover of darkness. The officials of the Gotul organization often take advantage of their position and indirectly assist in the training of the novices and the non-initiate. The girls usually resent the actual act being performed in presence of the Gotul fraternity.

The popularity of a Gotul depends upon the personality of Gotul boys who can attract girls to the Gotul. In many big villages among the Muzas there are several Gotul-gurees in close proximity to one another and there are rivalries between the various fraternities for attracting the girls of the village. This is possible if the girls get sufficient attention from the boys and if the interests of the girls can be maintained by the personality of 'Gotul' officials and the ingenuity of the boys in providing variety entertainments for the girls.

In one of the Gotuls in Kondagaon Tahsil, one dark night at about 1 A.M. a torch was shot through the small entrance and we found three corners of the big house, each consisting of 6 to 10 persons. Closer inspection revealed the composition of the groups. In one corner a young man about 26 years of age was lying on his back and six girls of ages varying from 14 to 20, sitting round him, three to his right and equal number to his

left all eagerly listening to his recent exploits as we were told afterwards. The youngest girl was massaging an arm, while the eldest one was caressing the hair of the boy, while the rest were reclining with their heads touching the sides of the young man's body. The flash of the light had the immediate effect of making the girls conscious of their uncovered body which they started setting to order. In another corner, two young men were surrounded by five elderly girls, most of whom had passed their teens and all discussing with great concern a case of *Armirtur* or elopement. A Gotul girl had eloped with a young man of her choice; her father wanted her to marry her cousin, maternal uncle's son, the preliminaries were gone through but the girl did not approve of this union. She had already expressed her opinion to her comrades in the Gotul, her parents were informed but he did not view it seriously. The relevant facts of the case were being gathered by the Salam from the elderly girls who appeared to know much about the case. The third corner was occupied by several boys of ages varying from 15 to 20, some lying on their backs, others sitting while two girls were sandwiched between two boys, who had their hands round the neck of the girls. This corner was most noisy and peals of laughter from the girls and loud conversations of the boys could be heard as we approached the Gotul. Nothing that we saw was suggestive of any license in sex relationship but the interesting grouping that we discovered

in the Gotul throws light on the organization of the Gotul fraternity.

There are age-grades in the Gotul. The fraternity is divided into groups based on age, and although the mean age of the Gotul fraternity we investigated was 14.9, there were as many as 5 grades into which the 39 inmates were distributed. Besides these age grades there were also sex-grades and girls usually kept together unless there were unusual attractions to separate them. When a girl is asked to join a particular group of boys she manages to persuade some of her friends, so that a single girl is seldom found in any of these groups. Girls usually sit together or join the boys but rarely they pair off with boys. Outside the Gotul also, we found similar groups sitting by the side of fire in which both the sexes were equally represented. In one group three girls were massaging a boy who, we were told, was the last arrival in the Gotul and thus was receiving the attention of the Gotul girls, all others evidently having been treated previously.

The distribution of work by the Gotul officials was, as admitted by them, on the basis of this age grading in the Gotul and every age-grade was aware of what its members were expected to do, whenever their services were requisitioned by the village or their labours needed for the Gotul itself.

The relations of a Gotul girl with her family so long as she remains a member of the Gotul

are of secondary importance to her and although she has to do some routine duties for the family to which she belongs, her interest centres round the life activities in the Gotul to which she is a willing participant. Her allegiance to the Gotul often militates against her larger interests of family and village solidarity, but the strict discipline of the Gotul with its lure of amatory life puts a severe strain on her loyalty to her family and familial obligations. But the other aspect of this double allegiance is of very great importance to the clan or tribal solidarity for the interest in children which parents must necessarily have, and the affections they possess are not centred on their own children only, but extend to children in general, and the Gotul which to the village is a symbol of clan manhood receives the fostering care of the village. Quarrels often arise among the inmates of Gotul which may assume serious proportions, and the arbitration by the Gotul officials may not satisfy the parties to the dispute; but seldom do such involve the parents of the children concerned.

The Gotul institution is found in a state of high elaboration among the Mūṛiās of Kondagāon and those of Nārāyanpur; it is practically absent among the Pārjās, Gadabās and other tribal groups whose social position is superior to the former. It is present in a less complicated form among the Dandami Mūṛiās and in a rudimentary form among the Hill Mūṛiās, both of which sections of the tribe are culturally inferior to the Mūṛiās. The Pārjās and

Gadabas have some common houses where the young men of the tribe find shelter during the night, but there does not exist any arrangement or organization among those who share the same roof. The Marias, as we have already mentioned, possess the dormitory institution but it exists in embryo only. The dormitory among them is a men's club, where the able-bodied hunters sleep at night and the unmarried girls visit the young men, if and when they like. When the men are engaged in agriculture and sleep in the corn houses particularly when the crops ripen, the dormitories are either closed or inhabited by idlers or those whose services are not needed by the families to which they belong, it being the usual custom among the tribes for the senior male members to sleep in the corn houses.

The Gotul organization does not appear to have anything to do with sexual segregation, for such segregation is not usually found in tribes possessing dormitories. Besides, most of the tribes which practise this institution allow sufficient liberty to the women, and slips of morality so long as they — confined to the tribe are scarcely heeded. The facts we have already detailed above show that the dormitory fraternity is composed of various clans, marriage among whom is not barred by tribal or clan laws. Thus the necessity of sexual segregation is hardly enough to explain the origin and continuance of the institution.

The relevant facts which have bearing on the origin of this institution are as follow :—

(1) The distribution for this institution among hunting and nomadic tribes is extremely significant.

(2) The need of protection of the tribal group from the ferocious denizens of the forest as well as from the alien and hostile groups who may prey upon them for women or cattle or for both. The ablest hunters of the tribe had therefore to keep together for this purpose.

(3) The need of keeping awake during the night or major part of it for purposes of protection. These people usually take rest in the early hours of the night and during the day time which make possible the dormitory life with its nightly bonfires and its varied programmes of fun and festivities.

(4) Sex acts are usually tabooed during the busy agricultural season when men work strenuously in the fields or go in for ceremonial hunting in the forests, and the women therefore have to keep together for some periods of the year as any violation of this taboo will have disastrous effects on the economic life of the family and the social group.

(5) From the time new crops shoot into corns and till the harvesting is over, all the men sleep apart from their wives in their fields while the latter sleep in the village. This also leads to the compulsory segregation of the sexes.

(6) Husbands, for example, among the Marîās and Muçîās, are not allowed to sleep in the house

with their wives so long as the navel cord of the new born child does not fall off.

(7) Wives have to live separate for three to five days either in the communal hut or any special one provided by the family during the period of menstruation when it is taboo to see men and associate with any female not so polluted.

(8) Sexual relationship is not allowed between husband and wife during the first few years after child-birth or till the child is weaned.

(9) As Grigson writes, "The Hill Marias are still doubtful about the propriety of men sleeping in the house or regard the jungle or some place overshadowed by the thick leaves of the *Siari* (*Bauhinia Vahlia*) creeper as the right place for intercourse between man and wife." There is a prejudice among many primitive tribes to have sexual intercourse with wives in their houses. It may be either due to ■ belief that the god of prosperity or the ancestral spirits will get annoyed or to the fact that the shades of the ancestors are usually sheltered in the house or a part of it, so that the sex act performed in the house would have the same effect ■ doing it in public. The sanction for this custom may be traced to the belief that such irregularities result in damage to crops by pests or in the complete loss of yield and general calamities such as excessive precipitation, inadequate rainfall, diseases of cattle and crops and the various epidemics which claim their toll from the people.

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(10) Most of the hunting communities which possess the dormitory institution are very sparing in the construction of houses. A family usually possesses one hut which may be partitioned off to accommodate cattle or for housing the ancestral shades. Husband and wife sleep in one room with immature children and when these grow up they need to be removed; and wherever the dormitory house exists, they are conveniently housed in it.

Origin of the Institution.

It has been the fashion with some anthropologists to trace the origin of institutions to simple beginnings, and also to a single source. This monogenist attitude of the anthropologist appears to have been inherited from the biological sciences in which anthropology is deeply rooted. Recent researches do not prove the legitimacy of the monogenist view of evolution — it has been found that when history began men found themselves already possessed of those characteristics of skin, colour, hair, form and the shape of the head which serve as the marks of race. The fossil remains of man that have been found in various parts of the world and the handicrafts of extinct types of man discovered during the last one century afford tangible evidence of the antiquity and diversity of the human family and of the range of its earlier migrations. If such is the case for the hypothesis of monogenesis in the sphere of organic evolution, its application to cultural evolution has to be watched with greater

vigilance. Most of the anthropologists of the historical school have held monogenist views regarding the origin of social institutions and it is this that has rendered their explanations of dubious value. The functional school of anthropology owes its consolidated position to-day to the failure of the monogenetic historical school in interpreting cultural origins, — field investigations in selected areas under controlled conditions have raised issues the solutions of which could not be arrived at on the basis of single origin.

The origin of an institution, a custom or a religious rite may be an accident, — inventions usually are, but the complicated machinery of social formation that we have inherited today has gathered its complexity and momentum in course of its career. A group may take an animal or plant name to designate itself, another may be known to trade or live on a particular animal or plant species by which it may be known to the outside world, an individual may take as his or her guardian angel an animal which might appear to him or her — protector in a dream, a woman may name her son or daughter after the animal which she believes to have mysteriously fecundated her, but the complex institution of totemism that we find among many social groups owes its complexity to many traits whose identity is difficult to distinguish to-day. It does not matter what accident or other cause was responsible for the origin of — institution; in most cases it is a minor incident in the life of — individual or that of a

human group; but it is essential to know how the institution has grown, how the different elements of the trait-complex have been grafted to the original trait stem. Once a particular idea or a custom is introduced by an individual and is adopted by the social group for utility or for spectacular effect, 'it would be kept alive and strengthened by ideas and sentiments not in themselves adequate to start the custom.' Such is the case with most of our social institutions.

The principles which underlie the survival of social institutions are indeed numerous. An institution, if borrowed from an alien source, may remain for a time unchanged. The people who borrow it can easily adapt themselves to the institution as the borrowers need not enter into the spirit of the institution but can depend upon mere imitation.

A cultural trait, borrowed or indigenous, remains unchanged if it cannot be fitted into the existing structure of the society or if any change in form leads to maladjustment. Again an institution may be put to several uses. So long as it subserves a number of purposes, its position in the social life of the community is readily conceded but as soon as it is found that the trait or institution does not subserve the interests which it used to do, it loses its hold on the social life of the group concerned.

An institution, as I have said, may be introduced by accident. The belief in its efficacy may keep it alive in an unchanged form. Interest in it deepens if it can be put to more and more

social uses. The larger the number of social contexts into which a trait fits in, the greater the number of interests it fulfils. The survival value of an institution is proportional to its utility as every cultural form is an instrument of adaptation. Its rôle is to render the process of adjustment of the group to its milieu — also of the intra-group adjustment, smooth and easy.

The longevity of a trait therefore rests upon a number of interests that it stimulates. When again, some of the interests that are usually answered in an institution may not find satisfaction in the accepted form or when a new object or trait diverts the attention of the group from the cultural form, it decreases in popularity and disintegrates altogether or remains in an attenuated form. Thus an institution may survive through the *principle of graded utility*. This is how the dormitory institution among the tribes of Bastar we have discussed above has survived.

The dormitory is a group organization. Its origin may, as we have already indicated, be traced to the campings where the ablest hunters of the community took their shelter for purposes of defence and protection of the weaker members, but in course of time other traits have slowly been woven round it and the elaborate Gotul of Murias is the result. With settled life and a better control of food supply, predatory excursions of neighbouring groups for women or for cattle become rare, but economy of accommodation in the house helps to maintain this communal organiza-

tion as the members find it a convenient place where to sleep in and a venue for their communal activities. Association of men and women in the dormitory helps to make the group-life vivid and concrete. Opportunities for intercommunication between the members of the group sets up a group-standard of social life and the effect of a deviation from the group are seen more in their proper perspective. It is in the dormitory that a system of discipline may be rigorously tried, and the success in this direction has contributed not a little to tribal and clan solidarity and often slavish compliance to traditional usages, such as we find in most of our primitive groups. Training of boys and girls in the usual economic pursuits characteristic of the group, in social and ceremonial duties, in sex and associated matters, is inculcated through the dormitory organization and thus fulfils an important rôle in the tribal life of the community concerned. Above all, the dormitory institution, where it exists, insures tribal endogamy by controlling the movements of women within the tribal area and prohibiting social intercourse between men and women belonging to different tribes. How far this has been achieved depends on the effectiveness or otherwise of the dormitory organization.

An Institution of Advanced Culture.

(The Dusserah Festival)

The Dusserah festival, on the other hand, has a different tale to tell, for it has been introduced by

the ruling family ; and participation in it of all tribes and castes of the State is regarded as more or less obligatory. Tradition has it that the family goddess of the founder of Bastar family was Dhanteswari who appeared to him in a dream and advised him to flee from Warangal whither the Mohammedans had pursued him. Annam Deo, for that was his name, followed the advice of his family goddess and fled from Warangal. After traversing a long track through inaccessible areas he abruptly stopped on the other side of the Pairi river which forms today the boundary between the Kanker and Bastar States. The hereditary high-priest of the temple accompanied him, so also did some representative Rajput families. With them was brought the sword of Dhanteswari which in the new shrine dedicated to her in Bastar, provides the symbol of the goddess and even to-day the sword is worshipped in the Dhanteswari temple at Jagdalpur.

The Dusserah festival is held in honour of Dhanteswari, and except perhaps the Marias of Abujmarh, all other groups participate in the festival. The ceremony, however, continues for 15 days, and on each day there is a new programme. The peculiarity of this celebration is that it has brought together the various cultural groups in Bastar as shareers of a common heritage, for even the lowest of the castes has not been denied its share in the communal worship. Along with Dhanteswari a host of lesser powers and spirits, some indigenous, others borrowed, such as Patdeo,

Keshadeo, Jangdadeo, Hinglamata, Pardeshinmata, Barimata, etc., are prayed to and propitiated by the people. Thus this festival brings animistic tribes and the many Hindu castes in a common religious fold.

The Maharas, a Hinduized caste, yet untouchable and impure and weavers by profession, infamous for witchcraft and sorcery, but whose importance to the people of the State cannot be exaggerated — the State does not possess a net work of communications or markets supplying the simple needs of the people at large, are given a very distinctive rôle for it is they who determine the auspiciousness or otherwise of the ceremony. The temple of Kachin which is situated at the outskirts of the capital to which the ruling chief has to pray before he undertakes to perform the ceremony is perhaps dedicated to a tortoise. The totemistic Maharas had perhaps been responsible for this worship but the clever adoption of this deity by the ruling family has solved the problem of incorporation of the Maharas in the Hindu community.

On the 15th day dar half of October, in Kuar Amabasya, after the necessary offerings to the to the souls of the ancestors, the State-people living in the capital and neighbouring villages gather at the palace. With the Raja at their head on the back of an elephant, they proceed to the temple of Kachin where arrangements for their reception have already been made. A swing has been previously planted in front of the

temple and in the presence of the crowd, a Mahra girl of 7 to 8 years of age who was ceremonially married before to the priest to become eligible for this ceremony, comes out veiled and followed by a group of women of the same caste. The girl with her companions goes round the swing seven times while certain slogans are sung by the women in sing-song tune and after the seventh round, she receives a stick in her right hand and a shield in her left. One man from the crowd, a Teli or oilpresser by caste, comes forward, similarly armed, and pretends to fight the girl who defends herself against the skilful attacks of the Teli. During this struggle the girl foams in the mouth and swoons and is gently laid on the swing on a bed of the *Bael* tree where she undergoes a metamorphosis as it were. The gentle swings do not upset her nor does the thorny bed where she lies flat. Her eyes are fixed above and the restlessness disappears. The Rājā now asks the priest to pray to the goddess to ensure an auspicious Dusserah festival. After the necessary rites have been gone through, the girl shows signs of animation. She pretends to listen to the prayer of the Rājā communicated by the priest and slowly takes off a flower garland from her neck, offers it to the Rājā through the priest, and vouchsafes that the Dusserah shall proceed smoothly. The goddess has identified herself with the girl and through her has communicated her blessings on the Rājā.

After this function before the temple of Kachin, the Raja returns to the palace with the retinue and holds a Durbar the same evening. The priests in charge of the festival then announce their programme before the goddess which the Raja has to communicate to the Rānī and other members of the household. After the programme has been fixed, the Raja ceremonially hands over the duties of the State to his Dewan, who replaces the former as the secular head of the State. This enables the Raja to devote himself wholly to the spiritual duties he has undertaken to perform. The transference of his secular authority to the Dewan by the Raja is immediately followed by a change of attire and the Raja adopts the garb of an ascetic for nine days, i.e., as long as the *navaratri* lasts. He discards his spectacular turban and richly decorated dress, puts on an ordinary *dhoti* and a *pichouri*, wears a wreath of flowers round the head and profusely paints his body with sandal paste. He has to practise many austerities, is not allowed to put on shoes or any kind of foot-wear, and must sleep on the cold floor. He is not allowed to use any vehicle. His new rôle is inconsistent with the rights and privileges of kingship and he does not receive nor make obeisance to any person.

Midnight witnesses an important function known as 'Ghāt Neotā' or invitation to the river, the details of which are similar to those observed in marriage and religious ceremonies all over northern India. Next a 'mandal' or circle is drawn in

front of the Dhanteswari temple and a pot full of water is consecrated in the name of Varuna, the god of water, the following day. In the evening of the second day the Rājā visits the temple of Maowali (Dhanteswari) and also of goddess *Kalanki*, both of whom are housed in the compound, when people sing and dance to the accompaniment of music. After this worship, one of the members of the royal household, secures the services of ■ Halba usually belonging to the Jogi subcaste of Halbas, whom the Rājā selects to play the rôle of an ascetic to be kept in the Durbar hall for nine days. This man is made to live the life of ■ ascetic and much hardship falls to his lot during the period of his forced detention. The difficulty of fulfilling the required obligations demanded of the Rājā in the rôle of ■ ascetic due to his accustomed mode of life, and the dread of violating the religious code sanctioned by custom and enforced by public opinion, may have led to the introduction of the Halba ascetic, so that the latter fulfils many of the austerities which the Rājā would otherwise have to do himself. As the Halbas were the camp followers of the Rājā and reputed to have fought his battles, the selection of ■ Halba as an ascetic to share the Rājā's duties or his austerities can be explained.

The ascetic ■ Jogi (Halba) is made to sit inside the Durbar hall where a pit, six feet long, three feet broad and one foot deep is dug to accommodate him. An altar is made in the centre of the pit and is strewn with wheat grains

on which the Jogi has to sit facing east. In front of him there is placed a pot of water consecrated to the goddess and behind him is a raised platform made by piling ashes. Near the pot, a stool is placed on which is kept a sword. Over his thighs is placed a wooden plank which is nailed to the ground and another plank is placed behind him and pushed straight into the ground, so that the head and trunk of the Jogi may rest against this vertical post. The idea is to keep the Jogi in a sitting posture, because nine days would be too long a period for any person to keep a particular posture, unless he is pegged and fastened in the way described. The Jogi has to fast as long as he can, and when he is extremely hungry he is allowed to take some milk or bananas. For all these hardships the Jogi used to receive from the State Muafi villages for maintenance but the system has now been replaced by one of payment in cash and kind. When the Jogi is thus secure, the members of the royal family and the people at large are at liberty to visit the different temples as, for example, those of Sri Ram Karvakotin, Matadevi (all found in the same compound). The Rājā also returns to the palace and performs *pūjā* and listens to the recital of sacred hymns.

The third day witnesses the first chariot procession of the Rājā; in this procession his chariot is pulled by the Muñās and Dhruvas who come from far and near to pull the cords. After praying at the temples, the Rājā, amidst deafening shouts from the crowd, enters the wooden chariot kept in the compound

and the guard of honour fires the salute. The two ropes are taken by the two tribes, viz, Murias and Dhruvas respectively, and the chariot is slowly drawn by them and brought up to the main gate of the palace. The female members of the palace, now come forward and perform the 'Ārti' which terminates with another salute of gun fired by the guard of honour. The Raja then alights from the chariot and proceeds to the Dhanteswari temple for worship. The chariot used during the Dusserah are of two sizes, one big and another small and made in alternate years.

Two months prior to the festival the work of construction starts, the small one is made of heavy *Sal* beams with four wheels made of *Sal* wood and a hood supported by six wooden posts. The big one has eight wheels and eight posts to support its hood. The wheels of both are of massive size made from solid wood without *Sal* tyres or fixers. Wooden images of men on horse-back decorate the front of these chariots which are usually 25 to 30 feet high. The ropes which are meant to drag the chariots are made of bark twisted very thick and strong and are attached to the front axles. The chariots are tastefully decorated with flags and festoons of variegated designs.

The remaining five days, i.e. till the ninth day, the ~~program~~ programme is repeated and every day the number of women performing the 'Ārti' is added to by one till the number increases to nine on the Nawaratri day. On the eighth and ninth day, the Raja does not go out in his chariot; and these

two days witness the most elaborate rituals and ceremonies of the festival. On the eighth day, midnight worship is done in the temple of Dhanteswari which is performed by the Rājā along with the officials of the State. After worship at the Dhanteswari temple the company proceeds to a garden, a quarter mile off from the palace, where the worship is continued till dawn. The Rājā then comes back to the palace. On the Nawarātri day there is another interesting ceremony, known as the Kumārī pūjā in which nine unmarried girls are worshiped, fed and clothed. The Brāhmins are given food and clothes after which the Rājā is given a dish of cooked rice which represents the first handful of the newly cropped harvest. The ascetic who was confined in the Durbār hall is now brought out from his pit, screened from public gaze, and led to the temple of Dhanteswari where he offers his prayers after which he is set free, care being taken that the Rājā may not meet him or recognize him in his rôle of an ascetic.

In the evening at about 9 to 10 p.m. the news of the approaching palanquin containing the image of goddess Dhanteswari from Dhantewada, 57 miles from Jagdalpur where the shrine of the goddess is situated, is communicated to the Rājā. Barefooted, with anxious steps the Rājā proceeds to the outskirts of the town where he awaits the arrival of the palanquin and with slow and solemn pace he approaches the 'Doli' as it is drawing near and respectfully receives it. He puts one pole of the palanquin on his own shoulder, the other being carried by the

hereditary priest of the Dhantewada temple; and thus the 'divine burden' is carried ceremonially to the Durbar hall of the palace, where the image is worshipped by the Raja. The 'prasād' brought from Dhantewada along with the image is then distributed among the people present. For nine days the Raja has anxiously waited to receive this image; for nine days he has led an austere life, has sacrificed his pleasures and has prepared himself for this great event.

The Brāhmanas now put their heads together and fix an auspicious hour when the Raja may resume his secular duties. The image of the goddess Dhanteswarī or Manikeswarī is brought to the Durbar hall from Maowali temple and placed in a throne specially arranged for her, and in her presence the Brāhmanas announce the hour when the Raja should take upon himself the duties of the State. This news is circulated to the public by beat of drums.

At the appointed hour, clad in purple and red, decked with all jewels and ornaments, the Rāja returns to the Durbar hall. In the meantime the big chariot waits at the door and the Dandami Mārīās who have come from the interior to pull the chariot, are at their posts holding the ropes of the chariot which they start pulling as soon as the Raja enters it. The huge crowd that has gathered round the chariot are seen flying their banners with various emblems stamped on them, representing the different villages or clans that compose the crowd. The distance of the journey on the

chariot is doubled this time as the big chariot makes two rounds of the route instead of one made by the small chariot. The Rājā after completion of the journey re-enters the Durbār hall where he now receives the members of the house-hold, officials, and members of the public who pay *Nazarānā* and gifts. The *Durbāris* receive much courtesy from the Rājā and are given *pān supari*, attār or scents and and garlands. The Rājā then returns to his royal apartments.

On the eleventh day of the festival an interesting 'kidnapping' ceremony takes place. While asleep, the Rājā is stealthily carried by the *Murās* in a palanquin to a spot about a couple of miles away from Jagdalpur where he has to encamp in *Murā* settlements. The *Murās* and such other tribes as live in the neighbourhood make it an occasion for a hunt in the forests and any game, birds or animals they can secure are offered to the Rājā along with rice, vegetables and coins which they can afford. The big chariot is taken to fetch the Rājā back to the palace. A swing is placed on the top of the chariot and the Rājā is made to sit on it clad in yellow clothes with bow and arrows in hand. The return of the Rājā is an occasion for triumphant joy for the people and huge crowds greet the procession while the chariot is dragged home. The *Bhātras* take a leading rôle in this procession: armed with bows and arrows, they move up and down the route of the procession, shouting their peculiar slogans and parading their self-importance be-

fore a receptive crowd. As the chariot slowly winds its way back through lively crowds the day fades into twilight and the palace as well as the houses lining the route are illumined by garlands of lights and festoons. The women shower flowers and *chandan* (sandal-paste) on the chariot and welcome their Rājā home. Once the chariot is pulled up in front of the temple of Hanumān where a flag is offered in token, it is said, of the help rendered by the latter to Sri Rām in his battle with Ravana the demon king of Lanka. When the chariot reaches the palace the Rājā descends from the swing and hurriedly enters the temple of Dhanteswarī where he prostrates himself. Next he goes to the Durbar hall and ascends the throne. The royal mother or one of the principal female members of the royal family comes to receive him back and the former takes some mustard seeds and salt and throws them on all sides of the Rājā which assures the safety of the Rājā from evil spirits, for the kidnapping of the Rājā by the Mūriās who are reputed votaries of evil spirits makes such precaution necessary.

The thirteenth day is occupied by a thanksgiving worship of the Kachin goddess and a large number of goats are sacrificed. The next day there is another function called 'Kutumb Yātrā Pūjā' when under a banian tree, about two furlongs away from the palace, all the miscellaneous deities, native and borrowed, are jointly prayed to by the members of the royal household. The

last day of the festival celebrates the return of the palanquin containing the image of Dhanteswari to the Dhantewad temple after which the people assembled at the capital for the Dusserah return to their respective destinations. Throughout the ceremony a large number of goats and buffaloes are sacrificed which supply rations to the tenants who come to participate in the chariot procession. Some part of the expenses of feeding them is raised by subscription in kind while the State makes financial provision for the purpose.

An analysis of the customary division of labour obtained during the Dusserah festival will show how far the different tribes co-operate among themselves in social, economic and religious life. The construction of the chariot is left with the Sāonrās, the Lobars make the iron nails and bars required for the chariot. Dhakars supervise the construction. The special pūjaris of the chariots are the Khātis who perform the pūjā both before and after the construction. The stool on which the sword is kept in front of the Halbā Jogi is made by the Saonris. The Gadabas supply bearers for the Rājā's palanquin. The Halbās supply the Jogi and also guard the Rājā with drawn swords when the latter camps in the Muṛiā settlements. They also take part in the sacrifice as a Halbā is invariably engaged to kill animals for sacrifice. The Muṛiās, Dhruvas and Dandami Māriās pull the chariot while the Bhātras figure prominently on the occasion of the triumphant entry of the Rājā to the capital after the kidnapping by the

Murias. The Maharas supply the girl who determines the auspiciousness or otherwise of the festival. The respective importance of the various groups may be gauged by the duties each is required to perform, so that there is well-assessed division of labour based on the numerical strength and cultural stage of the group concerned. The Bhatras parade, armed with bows and arrows which are less effective than swords owned by the Halbas as the latter are supposed to be descendants of old garrisons of the *paik* militia. The Dhakars who are Rajputs and are the highest cultured group in Bastar are not required to do any manual labour; their duty naturally is supervision only. But whatever be the respective rôles of the various cultural groups, their participation in this festival is indispensable and all the year people wistfully watch for the return of the annual festival. In some sense, however, the existence of the various groups as independent units has become difficult, and inter-communication between them and reciprocity in their economic undertakings has become more real than before.

In the organization of temple worship all over the south, the various castes and tribes have been assigned their respective duties, so that economic participation of all the diverse and heterogeneous social groups has become possible. The division of the society based on race has been a recognised principle in the south and the two groups now designated as exterior and interior castes have duties corresponding to their racial affiliations.

Thus the exterior castes who belonged primarily to the Austroloid or pre-Dravidian substratum of population are allowed to co-operate with the interior castes, which represent perhaps the superior race, the Āryan-speaking invaders of the South, in duties which do not bring them together into close contact, while the performance of rites and rituals connected with the worship is done by members of the interior caste. In Bastar, however, the co-operation between the various cultural groups which do not appear to have maintained their ethnic identity is more real and the inferior cultural groups have not been denied important rôles in the organization and performance of the worship. While in the south the economic partnership between primitive and backward groups has been regarded as essential but no serious attempt has been made to bring together the different groups into a common religious fold, in Bastar the fact of their cultural difference has been forgotten and there is one festival for all in which rites and customs of primitive and advanced cultures have blended together.

Symbiosis and Acculturation.

In a recent article on 'Social Symbiosis' in *Man*, Dr. Nadel describes, how four different tribal sections originally distinct and separate cultural groups which have migrated into their present domicile have reacted and adjusted themselves to each other and eventually evolved a *modus vivendi*. To-day there exists between the separate localities and

migrant strata the closest co-operation which is the fruit of a far-reaching adjustment. The social, economic and religious activities of these groups are shown to represent a reciprocity and interdependence linking sections in the framework of a large embracing social group unit, that is, ■ Dr. Nadel calls, ■ symbiosis which represents the possible origin of clanship and is one of the three possible developments in attaining a social equilibrium between diverse cultural groups, co-operation, symbiosis and complete fusion. The example of the Dusserah festival and also other examples of reciprocal relationship and interdependence in economic and social spheres as found in Bastar, which space forbids me to detail here, presents a similar picture and it may be of interest to ■ if we can borrow the biological concept of symbiosis to explain these group contacts and consequent reactions. Dr. Nadel has justified the introduction of the term 'Social Symbiosis' in social anthropology, as it defines, he maintains, ■ new and specific category of social organization in contradistinction to cultural solutions or fusions wherein the different cultural groups have undergone complete assimilation or have formed one well-developed new cultural group in which the differentiating specific character of the parent cultural groups has been obliterated. The evolution (from many simple and isolated cultural groups) of ■ complex cultural solution or fusion could be marked into stages as the different cultural groups come in contact, associate temporarily for mutual benefit or as the bonds get closer, the groups associate perma-

nently for mutual benefit (though the groups remain distinct) until finally the distinctive characters of the different constituent cultural groups are lost. But I should think that if Dr. Nadel's idea was to define these stages, he should have brought in 'social commensalism' which would mean different groups living together, partaking of the same economic life and their association being mutually beneficial and more or less permanent: but would not imply any organic union. At this stage an internal partnership between the different cultural groups could have taken place and dissociation of the commensals would not have been fatal to the cultural life of the groups. A stage may be theoretically conceived when dissociation would mean total discontinuance of the independent cultural existence of the constituent cultural groups. This may be termed social symbiosis. But after all symbiosis is an analogy which will hold good if the continued cultural existence of the symbiotic groups was actually lost by separation; in short, the old cultural life of the group suffered death. But from ethnological evidence we find that this is hardly possible in a social constellation, however close the intimate relation between the different cultural groups may be. If we have to borrow any biological concept to interpret such group-co-operation and identity of interests, social commensalism would be more appropriate from both the anthropological and biological standpoints. The three stages given by Dr. Nadel would then be co-operation, social commensalism, and fusion. Even then the difficulty offered by simplicity of the term 'co-operation' will have to be met. The idea of symbiosis would be applicable only if the groups of men were so completely dissimilar as

to resemble different species of animals and secondly if there could be an organic union or internal partnership between 'organisms' of different species, so intimate that it can only be severed by death. Even if we replace organism by cultural groups, as Dr. Nadel suggests, and 'death' by discontinuance of continued cultural existence the analogy fails to answer other essentials of symbiosis. But like other concepts introduced in cultural anthropology from Biology and the social sciences which we use loosely or introduce with definite connotation, symbiosis also may be similarly treated and Dr. Nadel's plea for introduction of its concept in Anthropology should be seriously considered.

The contacts between social groups have led to miscegenation of cultures. A group which has not lost its interests in life and possesses vitality must adopt traits from other groups. This adoption of alien traits is usually selective and it is on the nature of this selection that the future of the group depends. The process of selective adoption may be called acculturation. When several cultural groups coming from different geographical areas meet and settle down in the same place, they react and adjust themselves to one another and may develop the closest co-operation between them. What Dr. Nadel calls a symbiotic relation is connoted by the process of acculturation and we have seen how reciprocity and mutuality of obligations between the various social groups of a culture ■■■ have led to acculturation which has linked section with section and produced an interesting culture complex.*

* This was the Presidential Address in the Anthropological Section of the Twenty-Sixth session of the Indian Science Congress held ■■■ Lahore in January, 1939.

*Crude Coefficient of Racial likeness of the Bastar People.
Standard Error for all 0.35.*

| | Dhakers. | Halba. | Bhatras. | Parjās. | Gadabas. | Navagha- ria Gondas. | Murias Narayan- pur. | Murias Konda- gaon. | Dandami- Marias. | Hill Marias. |
|-------------------------|----------|--------|----------|---------|----------|----------------------------|----------------------------|---------------------------|---------------------|-----------------|
| Dhakers | ... | 1.09 | 11.01 | 9.08 | 2.76 | 1.93 | 2.79 | 4.84 | 2.48 | 6.20 |
| Halbas | ... | ... | 6.77 | 5.97 | 4.31 | 3.71 | 5.96 | 7.58 | 1.60 | 5.14 |
| Bhatras | ... | 11.01 | ... | 3.07 | 5.38 | 6.07 | 13.40 | 17.39 | 4.98 | 2.66 |
| Parjās | ... | 9.08 | 3.07 | ... | 3.96 | 3.29 | 2.55 | 13.46 | 3.08 | 2.41 |
| Gadabas | ... | 3.76 | 5.38 | 3.96 | ... | 0.37 | 2.16 | 2.68 | 0.90 | 2.99 |
| Nawagbaria Gondas. | ... | 1.93 | 6.07 | 3.29 | 0.37 | ... | 2.28 | 4.77 | 0.86 | 2.74 |
| Murias of Narayanpur | ... | 2.79 | 13.40 | 2.55 | 2.11 | 2.28 | ... | 1.95 | 1.89 | 4.09 |
| Murias of Kondagaon | ... | 4.84 | 17.39 | 13.46 | 2.68 | 4.77 | 1.95 | ... | 5.12 | 9.27 |
| Dandami Marias | ... | 2.48 | 4.98 | 3.08 | 0.90 | 0.86 | 1.89 | 5.12 | ... | 2.23 |
| Hill Marias | ... | 6.20 | 5.14 | 2.41 | 2.99 | 2.74 | 4.09 | 9.27 | 2.26 | ... |

III. AN ENQUIRY INTO THE RACIAL ELEMENTS IN BELUCHISTAN, AFGHANISTAN, AND THE NEIGHBOURING AREAS OF THE HINDUKUSH.*

By

BHURENDRA NATH DATTA, A.M., DR. PHIL. (Hamburg).

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|--------------------------------------|---|
| I. Early History of Afghanistan. | (c) Laai tribes |
| II. Who are the Afghans? | i. The Chuttas |
| III. Anthropological investigations: | ii. The Sangurs |
| (a) The Afghans. | iii. The Bandija |
| The Pathans of the Western Punjab | Results. |
| (b) The Padjiks | (d) Afghan tribe |
| (c) The Hazaraks | i. The Padjis |
| (d) Unimportant tribes | ii. The Wanechis |
| (e) The Hindukush tribes | Results |
| (f) Iranian tribes | (e) The Dewars |
| 1. The Galtchis | (f) The Baloochis |
| 2. The Darwazis | i. Baloochis from the Punjab |
| (g) Paktirs and neighbouring tribes | ii. Other Baloochis |
| Results. | iii. The Meds |
| IV. Ancient history of Baluchistan | Results. |
| V. Anthropological data | VI. Comparison of the physical characteristics |
| (a) The Brahuïs | VII. Somatic types |
| i. The Sarawan-Brahuïs | VIII. Racial characteristics of the peoples of neighbouring lands |
| ii. The Loris | i. Persia |
| iii. The Mengels | ii. Central Asia |
| iv. The Kalandranis | iii. India |
| Result. | IX. Summary |
| (b) The Jats | X. The origin of the Biotypes |
| i. Jats of Sibi | XI. Conclusion |
| ii. The Mir Jats | |

* This is an English translation of a thesis submitted in German as the *Inaugural Dissertation* for a Doctorate of the Hamburg University in 1928, and here elaborated with copious additions and notes bringing it up to date.

I. EARLY HISTORY OF AFGHANISTAN.

Afghanistan, or the kingdom of the Afghans, forms a part of Central Asia and lies between 29° 30' and 38° 31' N.L. and between 61° and 75°. The present name of the country originated in the modern period when the Afghan tribes became the ruling class in the land. Before that, one part of the country belonged to the so-called Moghul Empire of India, and formed a part of India¹ and was known by the names of its respective provinces, viz., "Province of Herat," "Province of Candahar," etc.

Afghanistan forms neither a geographical nor an ethnological unit; rather it is a conglomeration of different races and tribes who are only held together by the common religious bond of Islam and the rule of the Barakzais—a branch of the Durani-Afghan tribe.

The population of Afghanistan is divided into :—

- (1) Pushtu-speaking Afghans or Pathans ;
- (2) Persian-speaking Tadjiks and other Persian-speaking tribes which include the Mongolian Hazarahs, the Chaler Eimaks;
- (3) Turkish-speaking Uzbeks who dwell in Afghan-Turkistan ;
- (4) The Hindu-kush tribes like the Kafirs who speak a sort of Aryan language.

¹ See the *Records of the Moguls*. It was also called as "Khorasan" or Khurasan. In old days the Central-Asiatic table-land extending from the east of Iran to north India was known by the name.

According to the view of many modern historians, the Western part of Afghanistan was not unknown to the writers of the *Avesta*. Regarding the Eastern part, the Kabul river has been mentioned in the Vedas as the "Kubha."² Some consider the Kabul Valley to be the land of 'Sapta-Sindhu'³ spoken of in the Vedas. Further, a tribe called "Paktha"⁴ is mentioned in the Vedas.

² The modern way of transliterating this Sanskrit word in European language is *Kuvaha*. The name of the river Kubha occurs twice in the Rigveda, V. 53, 9; F. 5, 6. Macdonell and Keith think that it is undoubtedly the same as the modern Kabul river, known to the Greeks as *Kophen*. See "*Vedic Index of Names and Subjects*." Vol. I. p. 162.

³ The name of *Sapta Sindharah* "the seven rivers" is mentioned only ■■■ in the Rigveda as the name of a definite country. *Rigveda*, viii, 27 27. See also Vivien Saint-Martin.

⁴ It is the name of a people mentioned in the Rigveda, vii 18,7. Here they are mentioned ■ one of the tribes that opposed *Tritsu-Bharatas* in the *Dasa-rajna*, or 'battle of the ten Kings'. Zimmer (*Altindisches Leben*, 430, 431) compares them with the tribe of *Paktues* and their country *Paktiuke*, mentioned as in the North-West of India by Herodotus (vii, 65 [Paktues]; iii. 102 and iv. 44 (Paktiuke) and with the modern *Pakhtun* in Eastern Afghanistan, holding that they were ■ northern tribe; this is probable since the *Bharatas* seem to have occupied the *Madhyadesa*, or 'Middle land'. In three passages of the *Rigveda* (viii, 22, 10, 49, 10; X 611) a *Paktha* is referred to as a protege of the *Asvins*. The second connects him with *Trasadasyu*, whose tribe, the *Purus* were aided by the *Pakthas* in their unsuccessful onslaught on *Sudas*. In the third passage he seems identified as *Turvayana*, and appears ■ an opponent of *Cyavana*. Probably, therefore *Paktha* in all cases denotes the King of the *Paktha* people." See *Vedic Index* Vol. I pp. 463-464.

At a later period, Herodotus speaking about the extent of the Persian Empire, mentioned the following facts regarding the peoples of this region. He said, "The Sattagydae,⁵ Gandarians,⁶ Dadicae,⁷ and Aparytae⁸ joined together, contributed one hundred talents; this was the seventh division." That is, the lands of these tribes joined together, known as "the country of the Pactyika" formed the seventh satrapy of Darius Hystaspes.⁹ He further mentioned that "the country of the *Pactyika* lay near the Indian side."¹⁰

⁵ The land of the Sattagydae adjoined Arachosia on the east, corresponding to South Eastern Afghanistan or the tract between Kandahar and the Indus valley. See George Rawlinson, 'A Manual of Ancient History' Pt. I pp. 18-19. Bellew's attempt to identify them with the modern Patban tribe of 'Khattaks' is not convincing.

⁶ The land of the Gandarians lay above the Sattagydae, comprising the modern Kabul and Kafirstan. Its principal stream was the Gopheh (or river Kabul); a tributary of the Indus, and its chief town Gaspaterus (Kabul); *Ibid.* The Gandarians and their country "Gandhar" appear very prominently in Sanskrit literature. They were decidedly regarded as an Indian tribe.

⁷ It seems that the site of this tribe cannot be traced. Some tried to identify them with the Dards of Dardistan. But these are wild conjectures.

⁸ To me it seems that Aparytae are identical with the Apridi or Afridi of Afridistan, a tribe dwelling in the North-Western Frontier of India, originally they spoke a language akin to Grierson's 'Kho'dialect of Aryan language. After the sixteenth century they changed their language for Pushtu. My information is that they speak a broken form of Pushtu.

⁹ Herodotus III. 92.

¹⁰ *Ibid* III. 102. "There are other Indians bordering on the

In the Persian annals of Darius. I¹¹. we find the following names mentioned;

city of Caspatyrus and the country of Pactyica, settled northward of the other Indians, whose mode of life resembles that of the Bactrians.' Some controversy has been raised by the Orientalists regarding the geographical position of the country of the Pactyica; Marquhardt says that it lay near Armenia. He must have based his opinion on the following passage of Herodotus, "From Pactyica, and the Armenians and the neighbouring peoples as far ■ Exerine sea, four hundred talents; this was the thirteenth division" (III. 93). The country of the Pactyica in question here lay in the seventh division of the Persian Empire, hence the both cannot be identical. Herodotus was clear in his location of our Pactyica in his Book iv 44 where he said,—“Darius, desiring to know where the Indus issues into the sea, sent ships manned by Scylax; these set out from the city of Caspatyrus and Pactyic country, and sailed down till they came to the sea.” Further reference of the Pactyic peoples occurs in the same in Book iv. 66. He said “The Parthians, Chorasmians, Sogdians, Gandarians and Dadicæ joined the army having the same accoutrements as the Bactrians.” Here Herodotus put them in the ■ group with the tribes of the eastern border of the Persian Empire.

Further in “Behistun tablet” of Darius Hystaspes they are mentioned with the tribes of the Indian Frontier. Here they are mentioned as a non-Persian people wearing goat-skin coats. (Rawlinson—“The Great Inscription of Darius at Behistun” in “History of Herodotus” vol. II). Herodotus also says (Book VII. 87.) “The Pactyes also wore goat skin mantles and had bows peculiar to the country and daggers. “Travellers say that the Afghan mountaineers even to-day wear goat-skin mantles. The ancient historian was also clear regarding the non-Persian affinity of the Pactyes by mentioning (Book VII. 85) that “there is a certain nomadic race, called Sogartians of Persian extraction and language; they wear a dress fashioned between the Persian and the Pactyan fashion.”

¹¹. Lassen—“*Indische Alterthums Kunde*.” Bd2, and Z. F. i. k. d. M. vol vi, p. ■ and 92.

The Hindus or the inhabitants of the Sindhu valley,
 The Harakhwatis or the Arachosians and,
 The Gadara, which must be identical with the
 Gandarians mentioned by Herodotus.

Then followed the invasion of Alexander the Great. In his march from Arachosia (the modern province of Candahar) towards Bactria,¹² Alexander first met the Indians who were named by some—the Parapamisadians¹³

Then followed the march of Alexander against the "true" Indians,—the Aspasians or Hippasians, the Gurians and Assakanians.¹⁴ Strabo says that after the death of Alexander in the East his successor the great Seleucus in 310 B.C. ceded the eastern part of his territory (west of the Indus) to the Indian monarch Chandragupta, and it was peopled by a purely Indian population. According to Vincent Smith,¹⁵ the whole of present-day Afghanistan including Gedrosia (the modern South-Baluchistan) was thus added to the Maurya Empire of Chandragupta.

The question of the racial origins of the populations of this land has given rise to various opinions. Some¹⁶ think that the 'Pakhta' of

'Sindhu' is the Indian name for the river Indus, and 'Arachosia' is the ancient name of the modern Afghan province of Candahar. Gadara in Sanskrit is Gandhara.

¹² Arrian—*Anabasis* III, 28.

¹³ Parapamisad was the ancient name of the mountain range now-a-days known as the Hindukush.

¹⁴ Arrian *Anabasis* III, 23, *Iudika* 1-1-3, Strabo XV. 1.

¹⁵ V. Smith—'Early History of India.'

¹⁶ Bellew,—'Races of Afghanistan'; and *Imperial Gazetteer of India*.

the Vedas and the 'Paktyes' of Herodotus survive in the present Pakhtuns (as the name is pronounced on the North-West Indian Frontier) who are known in India as the Pāthāns. Again, two of the four tribes of the Paktyes can be traced historically.

The Gandarians¹⁷ must have been the Indian Gandharians mentioned in Sanskrit books. Again the same name occurs in Neamatulla's list of the Afghan tribes; and according to Bellew¹⁸ and others, the Apiridii or Aparytae must be the present-day Afghan tribe of Afridi who call themselves *Apridi*.¹⁹

Many attempts have been made to identify the peoples mentioned by the Greek and Roman writers. Thus an attempt was made to trace the modern name "Afghan" to the old name of "Assakanians" mentioned by Herodotus. But this and similar attempts have given no definite results.

From these sources we can gather that the population of the Eastern part of the kingdom of Afghanistan and the region of the independent Afghan (Pāthān) tribes which extends up to Peshawar, (this part is called Yaghistan i.e., the land of the freeman) was composed of Indian

¹⁷ Neamatulla in his "*History of the Afghan Tribes*" mentioned an Afghan tribe name *Gondari*. This tribe seems to have become extinct in modern times.

¹⁸ Bellew—"Races of Afghanistan," and *Imp. Gazetteer of India*.

¹⁹ I myself have enquired from several members of this tribe who clearly pronounce their tribal name = 'Apridi.' The word 'Afridi' seems to be an English corruption.

elements. The Western part, on the contrary, whatever might have been its political fate, was populated more or less by the Iranian-speaking peoples.

After the downfall of the Maurya Empire in India, a Hellenistic ruling dynasty was founded in Bactria in 245 B.C. In 140-120 B.C. followed the invasions of the Scythians and the Yue-chi to that country from Central Asia. At the same period the influence of the Parthians was strengthened in Arachosia.²⁰ One of their kings was Gandophaernes (A.D. 20-60).

About 15 A.D. Yue-Chi became the ruler of this country, and under the great Kaniskha established a powerful empire in 78 A.D. At that time this country along with Baluchistan was known to the Roman writers as Indo-Scythia. In the second decade of the fifth century after Christ came the invasion of the white or Epithalite Huns who became successors to the ruling power of the land.²¹

In this way the country was overrun by different invading hordes²² from Central Asia,

²⁰ The Parthians called the Arachosians "*The White Indians*." See Leidor-Charac-Monz Parth P.Q. ed. Hinds; also, Rawlinson "*A Manual of Ancient History*" Bk. IV pt. II Per I p.

²¹ Lassen—1. O. Bk. I, P. 434, and Wilken in *Abhandlungen der Berliner Akad.* 1818-1819.

See also Rawlinson *A Manual of Ancient History*, Book IV Part-I p. 553.

²² See the latest news regarding these hordes from the writing of Haumann "*Über die völkerrechtlichen sprachen von Ost-Turkestan im früher Mittelalter*" — Z. d. m. G. 1907 Bk. 9 and 1908 Bk. XXII;

who one after the other settled down in the land as ruler, and slowly took up the Indian culture and religion.

Then the conquering invasions of Islam burst upon the country. The Arab historians called this region the "Land of Hind and Sind." The populations then, as surmised, consisted either of Buddhists or Brahmanists with colonies and followers of Zoroaster living here and there.²³ The first Arabic invasion took place at the time of the Khalif Othman or perhaps under Muawiya, who sent the Governor of Basra Abd-al Rahman to the conquest

F. w. R. Muller "*Toxi und Kuisan*," in Sitzungsber. d. kgl. Pr. Akad. d. w.; Sten Konow "*Indo-skythisches Beitrage*," SD. AW. 1916, E. Sieg—*Ein einheimischer Name fur Toxi*—*ibid* H. Klatzsch—"*Morphologische studien Zur Rassen Diagnostik der Turfan-schadel*" 1913; Aurel Stein—*Zur Geschichte der Sahis von Cabool im Festgruss des R. V. Roth Stuttgart*, 1893, E. Meyer "*Geschichte des Alterthum*," Dr. Charpentiers' criticism on Yuc-ohi as a Centum language in Z. d. M. G. 1915 and p.

²³ W. Muir in his *The Caliphate, Rise, Decay and Fall*, p. 291 says "Idolatory long prevailed throughout these parts. In Sijistan the general seized the shrine of an idol made of gold with eyes of rubies."

See also, Al-beruni *Prolegomena to India*. He spoke of the 'Turki-shahi' ruling dynasty of Cabul who were Buddhists, and of the "Hindu-Shahi" dynasty of Lalliya the Brahmin of Cabul. See also Aurel Stein *Zur Geschichte der Shahi dynastie* and his writings on the ■■■■ topic in J.A.S.B.

Travellers say that there are many places in Afghanistan called Gorban (Guebrebond) which signify the existence of the followers of Zoroaster (called Guebres by the Muhammadans) in those places at the time of the Moslem invasion.

of Sigistan (old Sakastana, present Sistan). The army of the Governor overrun Sistan, Arachosia and Cabul.²⁴ But as soon as the Arabs left the country, the native rulers raised the banner of revolt.²⁵ None of these expeditions led to the permanent occupation of the land by the Mohammedans.

Finally the Arabs conquered Sistan²⁶ and made it their base of operations against the Kingdom of Cabul. But the different expeditions under Ubaid-Allahben Ali Bakra in Hejira 79 (A.D. 698) and under Al-Hadjdjadj in H. 81 (A.D. 700) against the Hindu king Ranbal of Cabul proved unsuccessful. The same fate overtook the expedition sent during the reign of Harun-al-Rashid.²⁷

²⁴ G. Le Strange in his *The Lands of the Eastern Caliphate* Ob. XXIV, p. 347, says "The city of Kandahar (in the ancient of Arachosia) is frequently mentioned in accounts of the first Moslem conquests of the places near the Indian frontier. Baladhuri says, it was reached from Sijistan after crossing the desert, and the Moslem, he adds, attacked the place destroying the great idol Al-Budd, doubtless a statue of Budha. After this period only incidental mentions of Kandahar occur generally as of Hind or the Indian frontier in in Mukaddasi, IbuRustam, and Yakubi.

²⁵ W. Muir, *Ibid* P. 201 says "Ibn Amir, governor of Al-Basara, after his victory at Khwarism — the Oxus left lieutenants who prosecuted the campaign to restore authority at the point of the sword in the revolted parts of Kirman and Sigistan, and brought under obedience the chiefs as far as Herat, Kabul, Gazna. The control must, however, — yet have been slight but desultory, for long years after we find these outlying provinces continually rising against Muslim rule, and again for the time asserting independence."

²⁶ *Encyclopaedia dis Islam* P. 171.

²⁷ Noeldeke—*Sketches from Eastern History* P. 182. He says "(Yakub) — well — his — made many conquests and plundering raids in these lands, of which, but unfortunately, we

New attempts began to be made in A. D. 80 when the Saffarians came to power under Jakub ben Lais. This chief invaded west Afghanistan and destroyed idols and temples. In this period the Hindu-Shahi dynasty was founded at Cabul by the Brahman Lalliya. This Hindu kingdom²⁸ was a barrier against the Muhammedan invasions of India, till it was conquered in the eleventh century by the Turkish conquerer Mahmud of Gazni.

In H. 350 (A. D. 961) Alp-Tegin the Turk conquered the Province of Zabulistan and founded a kingdom. It was the first Muhammedan state that was established in Afghanistan in the midst of a non-Muhammedan population.

The second king to succeed him carried an aggressive campaign against the Hindu kings of Cabul and of the Punjab. Cabul was captured from the Hindus in A. D. 1000.²⁹ After the death of Sabuktegin, his successor Mahmud continued the war of conquest against the Hindus.

In the reports of the expeditions of Mahmud of Gazni against India in the eleventh century, we find the name of the Afghans for the first time. They were mentioned by Alberuni³⁰ the court-historian of Mahmud, in his *Prolegomena*

possess almost no details. In March 871 an embassy came from him to the Caliph Motamid, bringing idols which he had taken in Cabul or in that neighbourhood.

²⁸ Aurel Stein—*On Shahi Dynasties* in J.A.S.B.

²⁹ See Vincent Smith—*Early History of India*, Third Edition.

³⁰ Sachau-Translation of Alberuni's *Prolegomena on India*.

on India, in which he said that the dwelling-place of the Afghans extended from the mountains lying west of India to the Indus valley ; and that the Afghans took service in Mahmud's army and were converted to Islam.³¹

Otbi, another historian of Mahmud, in his work "Tarikh-i-Jamini" described the Afghans as mountaineers who entered Mahmud's army. But in Al-Idris in his report on Cabul and Candahar at the end of eleventh and beginning of the twelfth century did not mention the name of the Afghans.³²

Thus the Afghans remained unnoticed in history until they came to India as the auxiliaries of the Turkuz. It is in the Gaznvide period that we first meet them. At the same time we find the name of another tribe, the Khald (Khiliji) mentioned by historians.

The beginning of the Islamic period brings to our knowledge the names of two most mighty tribes of this country, the Afghans and the Khalds (Ghilzais ?)³³

³¹ Ibn Batuta in his *Travels* in the same land still later mentioned the Afghans as "A Persian tribe living in Cabul." Regarding the spread of Islam he said that "the land of Zamindawar (in the western part) is still an infidel land though many Moslems dwell there."

³² Ferishta is said to have read from another historian that when Shahabuddin Mohammed Ghori fought against Prithwi Raj of Delhi in A.D. 1192, the latter had an Afghan Cavalry fighting under him. But the historical authenticity of Ferishta's source is questioned.

³³ See *Abhandlungin der koniglichen Gesellschaft der wissenshaft zu Göttingen—Phil.—Hist. Klasse. Neue Folge*, Bd. III. No. 2, den Jahren 1899 1901. *Bran—Schnact der Geographic d.Ps.* Moses Xorenali-von Dr. I. Marquart.

In *Eran Sahr* it is mentioned that Istakri and after him Ibn Hauqad reported about a Turkish tribe named Xalae living in present day Afghanistan. This tribe according to them has been living from a very old period in the land lying between Hind and Sagistan at the back of Ghor and has kept the Turkish character, costume, arms and language intact. (see Istakri 6, Ibn Hauqal 3-10, Idries I. 444).

According to the author the Xalae or properly called Xolae were the remnants of the Epithalites (See Al Xwari Zmi,—*Mufatih al Blum* 10). The Xolae of Afghanistan are for the first time mentioned in history in a campaign of Jajubbin al hais against Ruzzas and Zabil (Ibn al Adir VII). A hundred years later they were subjugated by Subaktagin the Amin of Gazni, and along with the Afghans of Ghor was made to enter his army (See Otbi in Elliot's *History of India* Bk. II P. 24. From this time they were often mentioned in history, and according to the author of *Eran Sahr* the Gilzai (Ghil Zai) = Gilgi (Gilji) one of most powerful modern Afghan tribe are their descendants. P. 253.

See also Raverty's "Notes on Afghanistan" in this matter. He also thinks the old Khilji tribe of Turkey is identifiable with the modern Ghilzais. But the latter speak the Pushtu language. James Darmesteter in his *Chants populaires des Afghans* (P. CLXVI, CLXXII) says that the Kholjis, properly the Kholaj, are not Afghans, by origin, but are Turks. He seems to identify the Kholj or Kholaj with the Gholjais. Speaking about the foreign element in the Afghan race, he mentions the Gholjais to be of Tartar element.

I think the ■■■ is yet to be settled whether the old Turkish Xolae, the mediaval Turkish Khillij, are the same with the modern Pushtu-speaking, hook-nosed (as some travellers affirm) Ghilzai tribe of Afghans. If they be the same, then the tribe must have undergone a fundamental transformation in racial characteristics as well as in phonetic change of the name !

INDIAN ETHNOLOGY AND GENERAL AN- THROPOLOGY IN CURRENT PERIO- DICAL LITERATURE.

Man for April, 1939, publishes a paper on "The Early Spread of Agriculture" read by Mr. Harold J. E. Peake before the International Congress of Ethnology and Anthropology at Copenhagen on 5. August, 1938. In an earlier contribution to *Man* in 1938, Mr. Peake had endeavoured to show that wheat was first cultivated in Palestine and that the variety grown was *Emmer*. From there he now traces the spread of wheat through Syria and Asia Minor to Africa and Europe on the south-west and west, and, on the south-east and east, through Russian Turkestan into India and beyond. A comparison of the form and the style of the decoration of certain prehistoric earthenware pottery discovered at Harappa and Mohenjodaro and a few other sites in the Sind Valley with corresponding artifacts from the top layers of the earlier deposit in North Kurgaon at Anau suggests to the author that "the early civilization of the Indus basin has been derived from Turkestan."

In the same number of *Man*, Prof. J. H. Hutton contributes an article on "The Burial Customs of the War Tribe" of Spella in the Khasi Hills of Assam. In the War process of cremation a bone is saved from the right hand or foot and this bone and a lock of hair (cut from the head with an iron arrow-head before the body is

placed on the pyre) are placed on a leaf of the *lakhiat* tree in the jungle close to the place of cremation. Later, a ceremony is performed at the place of cremation in the course of which a cowrie-shell is thrown on the ground, rice scattered round it, and the deceased invoked by name; and the shell is then wrapped up in a cloth, sprinkled with purifying water, brought home, ceremonially wrapped up anew in a fresh piece of new white cloth placed in a little basket-work case of split bamboo, and put into the slot of a wooden burial post already erected. The cowrie shell, thus treated and regarded as the deceased's bones, remains in its slot in the post until at the sacrificial ceremony of *Niam Bah* ('great ceremony'), when the cowrie-shell is removed from the post in a new cloth, and some vegetable fibre, supposed to represent hair, is inserted into it. A bone of the sacrificed animal (either a bull or a cow according to the sex of the deceased) together with the cowrie-shell is then placed in a basket which is tied to the post of a small hut specially built for its reception. The hut and its contents are allowed to decay. Before the *Niam Bah* ceremony, the soul of the deceased is regarded as keeping close to the family-dwelling. Although at present the War people hold that the *Niam Bah* releases the soul to return to the Creator (perhaps an idea derived from Christian contacts), Dr. Hutton is inclined to hold that the original intention was "to provide a receptacle for the life-matter of the deceased and to secure its ope-

ration for the benefit of her descendants until it could be considered to have been reabsorbed into living members of the family, or possibly till it — no longer required and could be allowed to return to the general stock." Reference is also made to the use of a wooden figure for the temporary accommodation of the soul among the Sawara tribe of the Madras Agency Tracts and the Naga of Assam.

In the same number of *Man*, Prof. J. H. Hutton in a letter with reference to the 'Clan of Personal Names,' points out the existence of hereditary right in personal names implied in the Lohta Naga custom (such as exists among the Purum Kuki of Assam) by which the price to be paid on the death of a married woman, whose children or descendants survive her, to her agnates, by her husband or his male heirs, is always accompanied by a small sum known as 'name-buying,' *mig-eshi*, which entitles her husband's family to utilize her name for descendants. He further traces connection (through a common belief in individual reincarnation) between this Lohta custom and the Kuki custom of 'bone price' and the Chota Nagpur Ho's traditional (but now obsolete) claim of the parents' village to the bones of a married daughter from her husband's clan on her death.

In the same number of 'Man', Mr. J. M. Datta refers to a peculiar mode of insect-chasing in vogue in certain districts of Lower Bengal similar to a game called *mamutji* among the Ngadajara children in Western Australia, and in-

quires whether the practice of pressing the thumb of the index-finger and moving the joined fingers upwards has a superstitious origin or is merely a "game proper."

In the May (1939) number of *Man*, Dr. A. Aiyappan points out the resemblance of Mohenjodaro perforated terracotta 'braziers' with a perforated earthenware pottery used for burning camphor in temples in the Tamil country and known as *ayi ram-kannu-pānai*, 'pot with one thousand eyes'. The Dravidian affinities of the Indus culture, Dr. Aiyappan suggests, "may be of interest in interpreting the perforated pottery of Mohenjodaro."

In the number for July-December of the *Journal of the Royal Anthropological Institute* (1938) Dr. Christopher Von Furer-Haimendorf describes the *Morung* system of the Konyak Nagas of Assam,—the different *Morung* officials, initiation into the *Morung*, reciprocity between *Morungs*, rivalry between *Morungs*, relations of individual *Morungs* with other villages, and the building of a *Morung* and the ceremonies connected with it.

In the *Quarterly Journal of the Mythic Society* for April, 1939, appear the late S. C. Mitra's "Studies in Plant Myths, no. 32," and an article "On the Vestiges of Human Sacrifice in North Bihar," and "A Note on the Travesty of an Ancient Indian Myth in a Modern Hindu ceremony" by the same writer. In the July, 1939, (Memorial) number of the same *Journal* appears an

article by Dr. S. T. Moses on "Frog Folk-lore," and the late S. C. Mitra's continuation of "Studies in Plant-Myths" and "Studies in Bird-Myths."

We welcome the first issue of the *Journal of the Indian Anthropological Institute* (Vol I, nos 1&2 combined, 1938] which opens with the Presidential Address on the "Future of Anthropology in India" communicated by the first year's President Dr. (now Prof.) J. H. Hutton, and is followed by articles on "Pre- and Proto- Historic Archaeology in India" by Lt. Col D. H. Gordon; "A Lohta Naga 'Apotia' Death" by Mr. J. P. Mills, "Anthropology in India and Ethnical Position of Indians" by Col. G. da Silva Corriea,; "Indian Oil Presses and Oil Extraction" by Prof. K. P. Chattopadhyay; "A Proposed Classification of the Nasal Elevation Index" by Mr. S. S. Sarker; "Fish-hooks in North America and their Distribution" by Dr. Biren Bonnerjea.

In the *Journal of the Royal Asiatic Society* for April, 1939, Dr. F. W. Thomas makes further observations on "The Nam Language" by way a Supplement to his Notes on the same language contributed to the Journal in 1926 and 1928 (J. R. A. S., 1926, pp. 505-6, 1928, pp. 630-4).

In *Science and Culture* for June 1939, Dr. B. S. Guha writes on "The Aboriginal Races of India." In the same Journal for May, 1939, Mr. H. P. Maity writes on the "Basic Factors of Personality" and suggests that "in the light of recent researches in personality development it would be unreasonable to lay too much emphasis

on heredity" and that the social factor is largely responsible not only for bringing into being a healthy pattern of personality but also to maintain it along healthy lines ever afterwards."

The July and August (1939) numbers of the same Journal, contain an article on "The Indus Valley 5000 years Ago."

In the *Indian Historical Quarterly* for June, 1939, Mr. N. Chaudhuri writes an article on "Rudra-Siva—as an Agricultural Deity."

In the *Journal of the Benares Hindu University*, nos. 1&2 for 1939, Dr. R. Pandey describes "The Pre-natal Samskaras of the Hindus."

In *Indian Linguistics*, Mr. Sudhir K. Chatterji contributes an article on "A Study of Bengali Surnames," and Mr. Krishnapada Goswami contributes "Linguistic Notes on Maimansing District."

In the *Annals of the Bhandarkar Oriental Research Institute*, vol. XIX, 1939, Mr. P. K. Gode writes on "The Antiquity of the Hindoo Nose-ornament called 'Nath'."

In the *New Review* for July 1939, Mr. B. A. Saleatore advances certain reasons for his unorthodox conclusion that "The age of the Vedas is much earlier than that of the Mohenjo Daro finds, probably by about a millenium."

In the *New Review* for August, 1939, S. C. Roy writes on "The Aborigines and the Depressed Classes in India," in which their origins, past his-

tory and present condition are briefly discussed, and their present-day social, economic, and political problems are briefly stated and solutions are suggested.

In the *Modern Review*, for July, 1939, Mr. R. K. Guha, contributes an article on "Three Types of Civilisation in the Ramayana."

In the August (1939) number of the same Journal Mr. G. S. Dutta describes and illustrates the "Mask Dances of Mymensingh."

In *Folklore* for June, 1939, Lord Raglan contributes an article on "Magic and Religion, and Prof. S. H. Hooke on "Myth, Ritual, and History."

In the *American Journal of Physical Anthropology* for April-June, 1939, M. S. Goldstein contributes an article on the "Development of the Bridge of the Nose" and M. S. Senyurek on "Pulp Cavities of Molars in Primates."

NOTICES OF BOOKS.

Anthropology and Sociology.

The Native Races of Asia and Europe. (Percy Lund Humphries, 1939). Pp. 399. Price 35s.

The Native Races of Australasia, including Australia, New Zealand, Oceania, New Guinea and Indonesia. (Percy Lund Humphries, 1939). Pp. 390. Price 35s.

These two bulky volumes, like the first volume of this *Anthologia Anthropologica* series, contain copious selections of passages for the study of Social Anthropology from the Manuscript Notebooks of that Doyen of Social Anthropology, Sir J. G. Frazer. Mr. R. A. Downie has edited these vast materials from Sir James' Notes with the same care, thoroughness and systematic classification that marked the first volume of the series which dealt with the *Native Races of Africa and Madagascar*. We cannot add to what we said in our review of that first volume in our last December issue. The volumes under review will be invaluable additions to the ethnologist's library. Copious extracts from old and rare books give these volumes a special value of their own. The books of this series will form an invaluable addition to the anthropologist's Library.

British Calendar Customs.—Scotland, vol. II : *The Seasons, the Quarters, Hogmanay, January to*

May. By Mrs. M. Macleod Banks. (Folklore Society, London, 1939) Pp. xii+253. 12s. 6d. *net*.

This most interesting volume sets out the stream of Scottish customs at fixed seasonal dates under the following heads :—

The Month :—I Names ; II Sayings, proverbs, rhymes ; III Omens ; IV Observances : (a) Festivals, general festivals ; local. (b) Visiting of wells, Stones, &c.

Days :—I Names ; II Sayings, proverbs, rhymes ; III Saints. IV Omens : (a) Weather and heavenly bodies ; (b) Fire, ashes ; (c) Water ; (d) Persons ; (e) Animals, birds, insects ; (f) Plants ; (g) Food ; V Observances including both general and local observances and customs,—(a) Unlucky or forbidden ; (b) Lucky or enjoined ; (c) Fire, ashes, torches, candles ; (d) Rites of divination or augury ; (e) The farm, barn, byre ; (f) Household ; churning, spinning, sweeping, etc. (g) Fishing and sea-faring ; (h) Water ; (i) Visiting wells, stones, altars ; (j) Sacrifice, blood-shedding, Scapegoat ; (k) Doles and gifts, (l) Begging ; (m) Food and drink ; (n) Pranks and tricks ; indoor games ; (o) Habits of animals, birds, insects. VI Witchcraft and superstitious beliefs, fairies. VII Natural phenomena. VIII Folk medicines. IX Mumming ; Gui Zing, dramatic performances, dancing. X Processions. XI Outdoor games, races, mock combats, holiday making. XII Festivals, fasts, religious observances. XIII Business transactions. (a) Municipal and civic ; (b) Private. XIV Prohibitions.

The method adopted in this work is that of presentation, with notices of important local variants.

As Mrs. Banks observes in the Introduction, the regional delimitation of such beliefs and rites as are recorded in the book "goes far in helping us to trace the various tribes or races which have blended on Scottish soil." The preparation of similar volumes on Indian Calendar Customs undertaken by competent scholars for each linguistic Province is greatly to be desired.

The Bunas of Bengal. By Minendra Nath Basu, M. Sc., F.R.S. (Calcutta University Press, 1939) Pp. 117+28 Plates and a Map.

Special interest attaches to the 'Buna' of Bengal as an instance of "heterogeneous groups of an allied type of culture gradually fused into a homogeneous body, when settled in the midst of ■ alien culture." "The process of fusion," as our author says, "is best seen in the social organisation. Instead of different tribal units each forming a clan, it seems that the most widely distributed clan names, generally common to all the tribes, were fixed upon." (p. 28). "The division (recombination?) into four clan groups clearly brings out the process of fusion in the Hindu social system. These four (recombined?) clan groups appear to have gradually assumed four class names, according to their functional affiliations after the Hindu social pattern, ■ 'Sardars,' 'Karmakars,' 'Dhulis,' and 'Malis,' in ■ hierarchical order.

Although in this book the author devotes ■ chapter to each of the principal aspects of the

life of the Bunas,—their Social Organisation, Material Culture, Economic Life, and Religion,—the treatment is not as full and intensive ■ may be desired. Nor are the inter-relations between the different aspects of their culture brought out. The fact that the contents of the book appeared in the form of an article in the *Journal of the Department of Letters*, Calcutta University, probably accounts for this defect. We expect the author will, before long, publish a fuller account of this very interesting social group.

White Settlers in the Tropics. By A. Grenfell Price, with additional Notes by R. G. Stone. (American Geographical Society, New York, 1939). Pp. xiii+811 \$4. 00.

The problem discussed in this book is why the white races, particularly the northern races, in general failed to colonize the tropics. The author also enquires whether they ■ beginning to make progress and whether they can hope for ultimate success. He begins with regional studies of some white settlements in the Tropics (Florida; Queensland; the Trade-wind islands of the West Indies; Tropical Australia, Costa Rica and South America; Africa; and Panama), and concludes by discussing racial, environmental, cultural and economic factors governing White settlements in the Tropics and also certain administrative problems connected with them. As for India, the author quotes, with apparent approval, certain

observations of A. J. Toynbee, Meredith Townsend and the Statutory (Simon) Commission :

"A. J. Toynbee believes that Europeans could not make themselves at home in the Indian climate and that in any case the existing native population 'was too numerous and too far advanced in civilization to be exterminated, ■■■ if our British Israelites had ever contemplated treating the Canaanite in India ■■ they treated him in America.'"

"Meredith Townsend writes of India,—'Not only is there ■ white race in India, not only ■ there no white colony, but there is no white man who purposes to remain...No ruler stays there to help, or criticize, or moderate his successor. No successful white soldier founds ■ family. No white man who makes ■ fortune builds a house or buys an estate for his descendants. The very planter, the very engine-driver, the very foreman of works departs before he is sixty, leaving no child or house, or trace of himself behind. No white ■■ takes root in India'"

"The Statutory Commission gives an excellent summary of the position of the Whites. It states :—'While the British connection is continuous and deeply rooted, the British individual is a sojourner, who, after spending his working years in India, looks forward to retiring to that country which is his real home. Only a small fraction of those who go out for the purposes of employment settle down in India permanently, and the European community does not grow.'"

Of the future of White settlement in the Tropics, the author concludes by saying, "Whether the ultimate result will be the production of ■■ ethnic groups adjusted to the various tropical environments only time can show....The scientific world has at last glimpsed the vastness and complexity of the problem. In the hands of scientific workers lies the solution."

Perhaps our author is not aware that an interesting experiment in this direction has been recently started at Macluskigunj in Chota-Nagpur, India.

The book is interesting and thought-provoking.

Culture and Kultur ; Race-Origins, or the Past Unveiled. By Herbert Bruce Hannah. (University of Calcutta, 1919). Pp. 156.

This book contains Lectures delivered by the author to the students of the Calcutta University. The author's bold contention in these Lectures is that "in remote antiquity the main trend of ethical and cultural developments, in their more important aspects, was not from ■ distant East to a very dimly adumbrated West, but from ■ West to an East, with regard to which, if anything can be asserted with confidence, it is this that the greater part of what we have heretofore imagined we knew about it is not knowledge ; it is in many respects either fudge or a nebulous chaos of more or less weirdly illumined hallucination—in any case absolutely and indubitably wrong."

The author's position is too revolutionary and is ■ utterly in conflict with the results of most modern researches on the subject, that it would require far more substantial and cogent proof to establish it than has been advanced in the Lectures.

Aspects of Bengali Society from Old Bengali Literature. By Tamonash Ohandra Das Gupta. (University of Calcutta, 1935) Pp. xviii + 367.

This is a book of sterling merit. For the first time, we have in this volume a realistic picture based on contemporay Bengali literature and of Bengali society, covering roughly a period of nine centuries (10th to 18th century, A. D.) in its different aspects, particularly in respect of (1) Manners and Customs, (2) Ship-building and Commerce, (3) Costume (4) Ornament, (5) Culinary Art, (6) Pastimes, (7) Warfare, (8) War-music, (9) Hindu-Moslem unity, (10) Architecture, (11) Religion, (12) Education, (13) Castes and Professions, (14) Agriculture, (15) Economic Condition; (16) Birds.

We cannot speak too highly of the industry, care and scholarly devotion with which our author has collected, collated and systematised an amount of useful and instructive material with a ~~■~~ and devotion which all students of sociology and social history should emulate. The book illuminates dim corners of the history of Bengali society.

Amara Bangali (We are Bengalees). By Prof. Hari Sadhan Chattopadhyaya. (H. Chatterji & Co. Calcutta) Pp. x+230+xxxii. Price twelve annas.

In this book, written in Bengali, the author gives a ■ interesting account of the social history of the Bengali people from the earliest times down to the present. The book is divided into twelve chapters and an Appendix, arranged as follows : I Ancient Geography of Bengal; II The Antiquity of the Bengali People; III Bengali Language and Script; IV The Might of Bengal; V Universities in Ancient and Modern Bengal; VI

Art of Navigation in Bengal; VII The Colonial Activities of Bengal; VIII The Special Characteristics of the Bengalis; IX Sculpture, Architecture, Art, Music and Painting in Bengal; X Immortal Heroes of Bengal; XI The Britisher and the Bengali; XII The Past and the Future of the Bengalia.—Appendix : The Political History of Bengal. The author has carefully looked up a number of source-books and accomplished his self-imposed task with scholarly ability.

On one or two points, however, his accuracy may be questioned. Thus, in chap II, in his account of the racial components of the Bengal people, he has omitted to mention what appears to us to be the radical ethnic element of the Bengali population,—namely the Alpine. The author's assertion that the "Austrie"-speaking people ■■■ to India from the north-east is no longer a generally-accepted proposition. Again, the Orāons of Chota Nagpur are "*pre-Dravidians*" and not, ■ the author writes (p. 17), Dravidians by race, although they speak a Dravidian dialect. But these are minor defects in a popular book of this kind. On the whole, the book is a mine of valuable information regarding the past and present social history of India, collated and arranged with scholarly ability. It will fulfill a very useful purpose and will be highly welcome to the educated public, and especially the youth of Bengal.

Archæology (Pre-historic).

The Earliest Men. By J. Reid Meir, F. R. S.
(Macmillan, 1939) Pp. 32.

This is the Huxley Memorial Lecture for 1939. In this Lecture a great authority on the Pre-history of Man attempts to answer Huxley's question—"Where, then, must we look for primeval man?" Was the earliest *Homo Sapiens* Pliocene, or Miocene, or yet more ancient? In answering this question all discoveries of undoubted artefacts of Stone Age man, and artefacts in respect of which human workmanship has been suggested or suspected are passed in review; and the conclusion that our author arrives at is thus stated: "Huxley's question as to whether man existed in the Pliocene period is answered in the affirmative. His further question as to whether this antiquity extends into the Miocene is answered, if the term 'intelligent being' is substituted for 'man,' also in the affirmative. But as to his third question, whether man existed in still older periods, no answer is at present possible." He adds, "To greatly extend our conceptions of man's antiquity appears a necessity, and though the number of years which have elapsed since the first flint implements were made cannot be accurately computed, it seems, in view of the geological and other evidence, to have been somewhere in the neighbourhood of two million years."

Folk-Lore.

Indian Tales. By Elizabeth Sharpe, (Luzac, 1939), *Price* \$ 10.

Much of the material used for the stories narrated in this book has, as the author says in the Authors' Note, "been collected from legend, old manuscripts and the bards of India." The fifteen folk-tales recorded in this volume take us back to the days wherein, ■ the author pertinently writes, "life was ■ simple thing, and intercourse between man and the denizens of the other worlds was counted an easy matter: and ideas were clear-cut,—deeds, good or bad, ripening to ■ inevitable fruition, and pain following ill-actions ■ invariably, and as irrevocably, as his own shadow followed man."

The book concludes with "The Stange Tale of Hirasuri" a Jain monk of the sixteenth century. It purports to be "a literal translation of a four-year old manuscript, altered, only when the religious zeal of the narrator would outrun his good manners, or, the meaning grew too obscure."

The author appears to have gained a fair insight into the mentality and traditional beliefs of the folk in India, which inspire the essential religiosity and moral basis of Indian folk-life.

Geography.

Principles of General Geography. By Dewan Bahadur H. L. Kaji. (Humphrey Milford. 1938). Pp. viii+355.

There are few books — Human Geography, written by Indian scholars. Students and teachers in this country will therefore heartily welcome this book written by an experienced educationist, to meet the special needs of Indian Students. After dealing in the first five chapters with facts and principles that go to make up the environment,—the Earth, its surface, climate, vegetation and animals,—and the division of the Earth into natural regions, the author proceeds in Chapter VI to deal with the environmental control on man, in Chapter VII, with the development of human life, and in Chapter VIII with 'Progress and Problems of countries.'

This book is ably written and we heartily commend it to all students and teachers. The reviewer cannot, however, omit to point out a few ethnological inaccuracies which, we trust, will be removed in the next edition. Thus, at p. 195, the author wrongly includes the Pre-Dravidian Bhils and Gonds in the 'Dravidian' race. The generic statement made at the same page that "the people of eastern India are descended from the Indonesian stock" is too indefinite to be correct or accurate. Further, care should be taken by teachers to see that the analogy between the Avatāras mentioned in the Purāṇas and the sequences of life on earth and human culture (pp. 254-257) are not taken too literally by the pupils.

1. **Benares, the Holy City.** Pp. 16. By C. A. Pankhurst. (Illustrated by Satish Sinha) (Macmillan.)
2. **Darjeeling and the Himalayas.** (Pp. 20). By C. A. Pankhurst. (Illustrated by Satish Sinha). (Macmillan).
3. **Picturesque Mysore.** (Pp. 20). By C. A. Pankhurst. (Illustrated by Satish Sinha). (Macmillan).
4. **Delhi, the Capital of India.** (Pp. 24) By C. A. Pankhurst. (Illustrated by Satish Sinha). (Macmillan.)
5. **Lucknow, an Arabian Nights City.** (Pp. 24). By C. A. Pankhurst. (Illustrated by Satish Sinha). (Macmillan).
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7. **Beautiful Kashmir.** (Pp. 24). By C. A. Pankhurst. (Illustrated by Satish Sinha). (Macmillan).

These books of the "*Here and There in India*" series are well fitted to entertain our children with delightful accounts and useful knowledge regarding notable places in their country. They are written in a very pleasant and easy style well suited to the taste and capacity of those for whom they are intended, and are calculated to excite a wholesome curiosity about and love for their motherland. The numerous well-executed illustrations make the books particularly attractive and instructive.

Greater India.

1. **Kamboj.** By Swami Sadananda, (1938). Pp. 36.
2. **Champa:** A Short Sketch of her Historical Evolution based on Architectural Ruins. By Swami Sadananda. *With a Foreword* by J. N. Banerjee. (1938) Pp. iv+28, with Illustrations.
3. **Malay.** By Swami Sadananda. *With a Foreword* by Dr. P. C. Bagebi. (1938) Pp. ii+38.
4. **Suvarnadwipa.** (Sumatra). By Swami Sadananda. *With a Foreword* by O. C. Gangooly (1938). Pp. iv+38.
5. **Angkor Park.** By Swami Sadananda. *With a Foreword* by Dr. Radha Kumud Mookerji. (National Publishing House, Calcutta, 1939). Pp. ii+28 & a Map and Illustrations.

In "Kamboj," our author contests the statement of Dr. Bijon Raj Chatterji in his book reviewed below, where he says, "We do not find any reference to Kamboja in Sanskrit literature," and proceeds to give a number of references in ancient Sanskrit literature, particularly the *Mahabharata*, *Ramayana*, *Harivamsa*, besides a few *Puranas* and *Kavyas*. He concludes that from the period of the *Ramayana* down to the battle of Kurukshetra, the 'Aryans' of India, in order to extend their empire south-eastwards, reached as far as Indonesia. "The older 'Naga (Khmer) kingdom of Cambodia was converted into a Hindu kingdom and the non-Aryan inhabitants of Cambodia, while

preserving their language, accepted Hindu ideals and, to some extent, Hindu manners and customs.

Though it appears certain that in Kalidāsa's time, the name of Kamboj was known well enough to Indians, it can hardly be definitely asserted that, during the days of the events related in the great Indian Epics, India had relations with Kamboj, although when the modern rescension of the Epics were made such relations would appear to have been established.

The Swamiji's accounts of Champa, Subarnadwipa (Sumatra) and Angkor Park give graphic accounts of the cultural influences of India on the history, sociology and architecture of those tracts.

The book on Malay is a collection of five essays respectively on 'Hindu Malay,' 'Malacca of old,' 'Historical Singapore,' 'Johore in the Early 18th Century,' and 'Malacca to Baling.' These essays — written in the light of intimate study and personal knowledge of the countries and routes. Without expert anthropometrical investigation, it is difficult to opine whether the Kambuja (Cambodian) population represents mere Hinduized MonKhmers or whether in the royal and other aristocratic families traces of Caucasian (either Indo-Aryan or Indo-Alpine or Dravidian) blood may be still discernible.

The talented author has earned the gratitude of the educated public by these popular accounts of the latest researches in the history, sociology and archæology of what is now rightly known — "Greater India."

Indian Cultural Influence in Cambodia. By Bijan Raj Chatterji (Calcutta University. 1928). Pp. xv + 303.

This brilliant piece of research was accepted by the University of London for the Ph. D. degree of the London University in 1926. Among the Indianised states of Indo-China, 'Fu-nan' appears to have occupied a prominent position and had a few vassal states under it. One of them was 'Kambuja' which freed itself from the suzerainty of Fu-nan in the 6th century, A.D. and gradually annexed the central provinces of Fu-nan. But Fu-nan, as such, soon ceased to exist. Tradition traces the origin of the Hindu royal family of Fu-nan to one Hiuen-t'ien the Chinese form of the Hindu name Kaundinya. An inscription, bearing date 658 A. D. relates the story of the foundation of Bhavapura—the capital of Kambuja (Cambodia), and the marriage of the Brāhman Kaundinya to Somā, the daughter of a Nāga King. Tradition also associates the origin of the Sailendra dynasty of Śrīvijaya in Sumatṛa with the Nāgas. Sculptured representations of multi-hooded Nāgas may be seen everywhere in Indo-China to this day. The genealogical tradition of the Kings of Kambuja (as distinguished from Fu-nan), however, traces their descent to Maharshi Kambu and the Apsara Merā; but this tradition soon died out, 'leaving the field to the older legend of the Nāgi.' It is interesting to note that the traditions of some other Indo-Chinese States also name great Brāhman *Rishis* as their founders, M. Pelliot, on an examination of rele,

want Chinese texts, seems to have come to the conclusion that Kaundinya did not come directly from India but from some place in the Malay Archipelago known to the Chinese as Heng-tie or Mo-fou.

Whatever may be the value of the details in these legends of origin, they clearly point to the impact of the superior Hindu civilisation on the primitive Khmer culture which could not have commenced later than the first century, A. D. By the second Century we find that the Hindu or Hinduised royal family of Fu-nan has adopted the Kshatriya title of Varman, as the names of king Sruta Varman and his successors show. In the third Century Fan-Chan, king of Fu-nan, sent an embassy to India. In the fourth century king Chandan of Fu-nan sent an embassy to China. In the first half of the sixth century, Kambuja overthrew Fu-nan, as we learn from the inscription of Bhavavarman of about the middle of that Century. In the 8th century, Kambuja was split up into two States. In the 9th century Jayavarman II. came from Java and built three capitals in succession, and later Indravarman I. built Bangkok, and early in the tenth century Yashovarman (Jayavarman VII?) founded Angkor Thom, and built Bayon,—the *chef d'œuvre* of Khmer architecture,—the great Siva temple with inscriptions in both North Indian and South Indian scripts. In the tenth century king Rajendravarman restored Angkor Thom as capital, and in the tenth and the first half of the eleventh century Mahayana Bud-

dhism began to grow in importance in Kambuja, although many Hindu temples were built. In the 11th century, however, there was a reaction in favour of Brahmanism. In the 12th century, Jayavarman VII, the last great sovereign of Kambuja, conquered Champa (which comprised modern Cochin China and southern Annam and Pegu), but early in the 13th century, his successor Indravarman had to evacuate Champa. In the second half of the 13th century Bantei Srei, the last great Khmer temple, was built; and there were Siamese incursions into Kambuja. In the 14th century, we find Buddhism tinged with Tantricism in Java and Sumatra; but at the Kambuja court we find a Brahman *Mahanta* ■ *Adhyāpakadhīpa* (Prince of Professors) and King Jayavarman-Parameshwara consecrating an Āsrama founded by his Brahman *kṛta*. Early in the 15th century Angkor was abandoned by the Kambuja kings under Siamese pressure, and Cambodia was reduced to ■ petty principality struggling with the Annamites in the east and the Siamese in the west. Early in the 16th century the new capital Lovak ■ abandoned to the Thais. In that century the Portuguese established some influence in Cambodia, and then came the Dutch; but the Europeans were of little account until the French arrived.

The impress of Indian culture on various aspects of Kambuja life shows that intimate social and cultural relations were long maintained with India. The Brahmanas of Kambuja appear to have been well organised, and to have been reinforced

by immigrants from India continuously from the 5th to the 14th century. As on the social, so on the religious side, Indian influence was manifest. Several Indian cults were known and adopted in Kambuja.

An original feature of Kambuja religion is the deification of kings, queens, learned priests, and other persons of distinction and their identification with Śiva in the case of men and Durga in the case of women; and the deities were represented by images bearing the semblance of the persons thus honoured and named after them. In this connection it is worth noting that the Bengali to this day speaks of ■ deceased relative ■ "Ishwara" so-and-so. The blend of Śiva worship and Mahāyāna Buddhism in Kambuja, Java and Sumatra has had its analogues in Bengal which appears to have maintained direct intercourse with the Malay Archipelago, particularly during the Pāla period of Bengal History.

A curious episode of Pāla history is the occupation of what is now the Dinajpur District of Bengal by ■ prince of the "Kamboja" dynasty and his successors for about half a century from about the middle of the tenth century until the earlier part of the eleventh century when Mahipal I won it back.

Although Surjavarmān I is stated to have "established the division of castes" and to have placed the Brāhman Śivācharya at the head of his caste, caste regulations appear to have been much more elastic in Kambuja than in India. Not only did Brāhman wed Kshatriya princesses but in ■ cases

Kshastriya kings (such as Jayavarman II and Jayavarman III) married Brāhmaṇa maidens.

Dr. Bijan Raj Chatterji and the Greater India Society have earned the gratitude of Indian scholars by having broken new ground in Indian history and opened out a new chapter in the history of ancient and mediæval Indian culture, and a new field of research.

Although it is mostly through the labours of European scholars and researchers that a portion of the veil that long screened off from view the glories of ancient Indian culture in Kambuja was first lifted, yet we cannot speak too highly of the industry, care and scholarly devotion of Indian scholars like the author of this splendid piece of research and other active scholars of the Greater India Society who have been collecting, collating and publishing all available, authentic material for the extension of our knowledge of Greater India, its history and culture.

History.

Founders of Vijayanagara. By S. Srikantaya, (Mythic Society, Bangalore, 1988). Pp. vi+174. Rs 5.

This book embodies the results of the author's researches — the Foundation of the Vijaynagar Empire in 1387 A.D., and the important part played by the celebrated sage Madhavāchārya Vidyāranya in the foundation of that empire. In determining the part played by Madhavāchārya, the

author has discussed the various traditions, chronicles and inscriptions which mention his connection with the origin of the Sangama dynasty. According to our author the origin and establishment of the Vijayanagara Empire was the outcome of a "comprehensive movement which took in its fold all forms of Hindu faith, including the prevalent forms of Jainism and other religious faiths of a non-descript character, for the preservation of the independence of Hindu *dharma*, free from the onrush of the proselytising Muhammadan and to provide for a peaceful home." And for the attainment of this object, a number of prominent men of all religions played their part. Amongst them were Mādhava, Sayana, Bhoganātha, Kiyāsakti, Mādhavamantri, Vidyātīrtha, the heads of some other religious faiths as well as prominent rulers like the Hoysala Ballalas of Halebid, the Rajas of Anegondi, Kampila and Kunmata, the Kakatiyas of Warangal, and the feudatory nobles Harihara and Bukka. Our author advances arguments in refutation of Father Heras' view that the connection of Madhavāchārya Vidyāranya with the foundation of the Vijayanagara Empire is a late fabrication of the 16th century.

The author has collected, collated and clearly set forth with critical acumen a wealth of materials bearing on the subject-matter of the book.

Indology.

Manu-Smṛiti : The Laws of Manu with the Bhāṣya of Medhātithi. Translated by Mahā-

mahāpadhyaya Dr. Ganga-Nātha Jha. ■ Volumes (Parts). (University of Calcutta 1920-29.)

Manu Smṛiti Notes. By M. Dr. Gaṅgā-Nātha Jha. 3 Parts. (University of Calcutta.)

The University of Calcutta has conferred a very valuable boon — all students of Ancient Indian Culture and of Indology in general, by having secured the services of a savant like Mahāmahāpadhyāya Dr. Ganga-Nātha Jha to prepare an authoritative English translation of the Text of Manu Smṛiti as well — of the invaluable commentary of Medhātithi thereon. The Translation appear to be the best hitherto published.

In the volumes entitled "Manu-Smṛiti Notes" the author has attempted "to complete and supplement the work done by Bühler and other translators of the Smṛitis," and has supplied all references to other books and English translations of all parallel passages cited by other commentators, and has also added other parallel passages (with translations) culled from other Smṛitis. The erudite author has, in the Third Part of the 'Notes,' traced a historical sequence in the evolution of Hindu Law.

The two works together form a monument to the ripe scholarship and industry of Dr. Jha, as well as to the zeal for advancement of learning that characterized the late Sir Ashutosh Mukerji, the great champion, inspirer and patron of Oriental Studies.

A History of Indian Literature. By Prof. Dr. M. Winternitz. Translated from the Original German, by Mrs. S. Ketkar (vol I), and Mrs. S. Ketkar and Miss H. Kohn (vol II), and revised by the Author. (University of Calcutta, 1927, and 1933). Vol I, Pp. xx+634; Vol II, Pp. xx+673.. Rs 10-8 each volume.

The first volume of this standard work by a great scholar deals with the Vedas, the Epics, the Puranas, and the Tantras; and the second volume deals with Indian Buddhist literature and Jaina literature. The German original of this work was a recognized authority, and India owes it again to the great Indian patron, champion and inspirer of Oriental learning, the late Sir Ashutosh Mukerji, that the Calcutta University undertook the publication of an English translation of the book for the benefit of Indian students and scholars in general. We have it on the authority of Dr. Winternitz himself that the translators have spared no pains to make the present translation as accurate and readable as possible.

Some Problems of Indian Literature. By Prof. Dr. M. Winternitz. (Calcutta University Press, 1925). Pp.130.

This book contains six Readership Lectures delivered to the post-graduate students of the Calcutta University by Dr. Winternitz in 1923. The subjects of the Lectures were respectively,—The

Age of the Veda; Asiatic Literature in Ancient India; Ancient Indian Ballad Poetry; Indian Literature and World Literature; Kauṭilya Arthaśāstra and Bhaṣa.

The profound scholarship, sobriety, soundness and incisive logic that mark every argument of Dr. Winternitz in these lectures impress even the lay reader. The learned author has placed Indian students under a debt of gratitude by these luminous Lectures.

The Yoga Upanishads. *Translated into English on the Basis of the Commentary of S'ri Upanishad-Brahma Yogin.* By T. R. Srinivasa Ayyaṅgar and Edited by ■ Subrahmanya Śāstri. (Adyar Library, 1938). Pp. xii+502. Rs 5.

The Adyar Library and the learned Translator and Editor of this work have placed all students of Indian Philosophy and Religion in their debt by undertaking an English Translation of all the 108 Upanishads. The translator has wisely chosen to follow the Commentary of S'ri Upanishad-Brahma-Yogin who is perhaps the only one so far known to have achieved the unique distinction of having written a Commentary on all the One Hundred and Eight Upanishads, closely following at the same time S'ri Śaṅkarāchārya's Commentary on the major Upanishads.

In very few books have the intricate processes of the ancient Yoga system been ■ lucidly explained. A lucid translation of all the Yoga Upanishads, as

literal as possible and based on authoritative commentaries, which the author attempts in this series is calculated to give a comprehensive view of the ancient Hindu Yoga system. To bring out and elucidate the idea in the more obscure passages of the Upanishadic texts, the translator has added, within brackets, notes based on the commentary of Sri Upanishad-Brahma-Yogin. The list of contents is very helpful to students as it practically supplies a summary of the topics dealt with. The addition of a glossary explaining a large number of Sanskrit words in Roman characters would have enhanced the usefulness of the work. But, as it is, the book is of great help in acquiring a working knowledge and an insight into the Yoga system of the Upanishads.

It must, however, be always borne in mind by aspirants to Yoga practices that for practical esoteric knowledge one requires the aid of expert teachers; for efforts at Yoga exercises appear to have proved harmful to many enthusiastic novices who had no expert teachers to guide them.

MAN IN INDIA.

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I. AN ENQUIRY INTO THE RACIAL ELEMENTS IN BELUCHISTAN, AFGHANISTAN, AND THE NEIGHBOURING AREAS OF THE HINDUKUSH.

[Continued from Vol. XIX, page 186.]

By

BHUPENDRANATH DATTA, A.M., Dr. Phil. (*Hamburg*).

II. ■■■ are ■■■ Afghans?

As we see from the chronicles, this part of Central Asia has been the meeting-ground of the races and cultures that came there from three sides: India, Persia and Central Asia. Different races, tribes, religions and cultures, one after the other, have played their respective role there; and in consequence, men with different racial and linguistic characteristics ■ met with in this country. Therefore the question arises, whether out of this mixture of peoples a new homogeneous race has ultimately developed, or whether the inhabitants still betray the old original racial characteristics, or what are the racial elements to be found amongst the present-day inhabitants of this land? The Afghans have given the country the name

by which it is known to-day; they are the most numerous, and politically the most powerful part of the population. The outside world according to political terminology knows only the Afghan nation. (I have myself heard a Tadjik from Cabul calling himself an Afghan). So, the question may be asked, what is an Afghan?

The language of the Afghans is Pushtu,¹ which according to Trumpp and Bellew² originated from Sanskrit, and according to Geiger³ and others belongs to the East Iranian language-group. The Afghans have not only their own language, but also a tribal law called "Pushtun wali" which regulates their customs and conduct.

Thus they are to be regarded as a people different from their neighbours.

According to the Afghan tradition, they are Israelites, "descendants of the Hebrew king Saul⁴ (Malik Talut of their tradition). They call themselves "Beni-Israelites." They are supposed to be the descendants of those Jews who were carried away by Nebuchadnezzar from Palestine and sent

¹ The total number of Pushtu-speaking people may be about 3½ millions, out of which 2 millions dwell in the kingdom of Afghanistan, 1½ millions in British and in the independent tribal lands.—*Ency. des Islams* P. 164.

² Trumpp, *Verwandschafts Verhältnisse der Pashto* id.z.d.D. *Mg. Ges* XXX; 10-155, XXXiii.

H. Bellew—*A Grammar of the Pukhto or Pushtu Language*, London, M.D.CCCLXVII.

³ W. Geiger, *Die Sprache der Afghanen—Grundriss d. Iran, Phil.* Part 1.

⁴ Niamatulla,—*History of the Afghans*.

to Media in captivity, who later settled down in Ghor (in eastern Afghanistan). Farid-uddin Ahmed, in his work *Risalah Ansaḥ Afghanieh* refers to this banishment of the Israelites to Kohistan in Ghor.⁵ According to his version, the Israelites, after the banishment, were filled with home-sickness and began to cry aloud (the sound uttered being 'Afghan', according to some it was 'Aagan') and from that time they were named Afghan. The Afghans trace their origin to a common ancestor named Kais or Kish who had three sons,—Batan, Ghurghust and Sarband or Sarabans. Tradition says that Kais was one of the first disciples of Mohammed who went to Mecca and converted his people to the new faith. The Prophet changed his name to Abdur Rasid and called him "Pahtan" which in the Syrian language means "Rudder."⁶ It seems that by transforming the historical name of Pathan to "Pahtan," an attempt has been made to give it an Islamic colouring.

Regarding the possibility of the "Jewish" origin of the Afghans, a lively discussion has been raised by British travellers and writers. It is maintained that the physiognomy of the Afghans speaks in favour of their traditions; that they have "Jewish"⁷ noses and their faces are of Jewish or Semitic cast. Bellew who lived long in Afghanistan attempted to prove that the Afghans are a Jewish people who have settled in the midst of an Indian

⁵ Farid-uddin Ahmed,—*Risalah Ansaḥ Afghanieh*, P. 64.

⁶ Niamatulla—*Ditto*.

⁷ Bellew,—*Races of Afghanistan*.

population, and have taken over the traditions of the latter. He attempted to prove that Batan, one of the forefathers of the Afghans, was a Hindu-Brahman (the name Batan is similar to the Brāmaṇ name Bhaṭṭa); and that Saravan or Sarayūn and Krishnavan (some write Kharshbund) or Krishnayūn both belonged to the great Hindu Rajput clans of Suryavaṇṣī and Krishnavāṇṣī respectively.

In that important book of Niamatulla's called "The History of the Afghans,"⁸ which was written under the patronage of an Afghan nobleman, Khan Jehan Lodi, it is maintained that the Afghans are the descendants of King Saul *etc.*, but in the list given there of the descendants of Sheikh Batan who became the ancestor of a number of Afghan clans, there are some Hindu names, *viz.*, the descendants of Chor, of the sons of Sheorani-Haripal. (Bellew thinks that Sheorani must be the Hindu name Sheoram). In this family Hameen had seven sons all of whom were given to idolatry.⁹ Toor (Dorn¹⁰ thinks that the name originated from the dark complexion of the man) had four sons one of whom was called Gaudari.¹¹ Is this the same as Gandaritis of Herodotus and Gandhāri of Sanskrit? Damar¹² had seven sons, one of them was called *Ramdeo* (an unmistakable Hindu name). Sarvani¹² had three

⁸ Neamatulla—P. 41.

⁹ Dorn—translator of Neamatulla's *History of the Afghans* pp. 3-133.

¹⁰ Ditto—P. 43.

¹¹ Gaudhari in Sanskrit means an inhabitant of Gandhara.

¹² Neamatulla.

sons: *Sani*, *Sarpal* and *Bali* (the three names undoubtedly Indian). Nager had six sons, among whom were *Thwan*, *Maru* and *Chand* (the last two being Indian). One of Dani's sons named *Darpal* (likewise Indian).

Further, there, is an Afghan tribe named Gondaphor, which has settled partly in the Indus valley, and partly in Baluchistan. Is this tribe in any way connected with the old Parthian king Gondopharas of Arachosia (modern Candahar)?*

Again, the Ghilzais have been mentioned as an Afghan tribe. According to the Afghan traditions, the Ghilzais belong to the tribe of the Sultan of Ghor who are of Persian origin. The tradition is that Zobak, a member of the Persian ruling family, was sentenced to death by the Persian monarch Feridun who ordered him to be hanged at the foot of the mountain Hemawand. The doomed man escaped from Feridun's revenge, by fleeing from Istakhar, the Persian capital, to Kohistan (of Ghor) where he settled. A scion of this refugee, Shah Hussain, entered into an illicit relation with Bibi Mato or Matu the daughter of Sheikh Batan or Batni and the grand-daughter of the Afghan tribal father Kais, later known as Abdur Rashid the Pathan. As the sign of approaching maternity became apparent the father who had come to know of the noble origin of Sheikh Hussein, gave him his daughter in marriage. Matu gave birth to a beautiful and remarkable son, who as the offspring

* Was the king a hero eponym of a Parthian tribe which later transformed itself into an Afghan one?

of secret love was called Ghilzye, *Ghil* in Pushtu means "Thief" and *Zye* "a son born;"¹² Thus Ghilzye or Ghilsai means then a "Thief's son."

Many European writers, viz., Major Raverty, Marquart¹³ and others, think that the Ghilzaïs were originally a Turkish tribe which in "*Eran-shahar*" and elsewhere have been named Khildjs or Khillijis.

Further, there are various tribes which though counted ■ Afghans, have not the ■ origin. Thus writes Neamatulla, "Syed Mohammed Gisu-diraz settled amongst the Afghans. These four clans are consequently Syed-zadas (descendants of a Syed); but they are considered Afghans."¹⁴ He continues—"The Fermullis and Khotanis do not belong to the Afghan race; they are the inhabitants of a place called Fermul. They (the Fermullis) however confess that their forefathers came from Khata and Khotan."¹⁵

Regarding those, who call themselves Afghans, but are not,¹⁷ belong the *Servatis*, concerning whom I insert the following remarks from the *Khulasat Ulunsali* :—"Although the *Servatis* are not originally Afghans, but having adopted both the Afghan language and habits, and being mixed up

¹² Neamatulla P. 44.

¹³ Marquart—*Eran Shahar*.

¹⁴ Neamatulla P. 56.

¹⁵ Ditto P. ■.

¹⁷ The Afghans claim that there are several tribes who though not Afghans in origin, yet ■ attached to some Afghan tribes. These are called *Mindans*. With the stranger they pass for Afghans.

with them, they go by the name of Afghans and are numbered among them.

The Servatis are divided up into three divisions... They originally were Tadjike, the rest of them are of different origins.¹⁸ Does the author mean by it that the nucleus of the tribe originally was composed of Tadjik element, and that later, there were accretions from other tribes?

Besides these, the populations of Laghman (Sanskrit *Lampaka*?) and Swat (Sanskrit *Soavastu*) — taken as Pathans though their names do not appear in Afghan genealogy. The Laghmanis speak their own language¹⁹ and the Swatis, who since their conquest by the Yusuf-zai Afghans lost their own language, adopted Pushtu and began to be regarded — Pathans. Further, the high priest and the historian of the Yusuf-zai tribe recorded in his *Tatkira* or Memoirs, that with the invasion of the Yusuf-zai-Afghans in the Swat Valley, "the natives became converts to Islam, lost their identity of race, and were called Swati."²⁰

So far, we can follow the traditions and the old accounts regarding the origin of the Afghans (Pushtu-speaking people). The story of their Jewish origin cannot stand the test of historical criticism. The very fact, as mentioned by the Afghans, that they — of the same tribe with Khaid ben Waled, contradicts this theory. The

¹⁸ Dorn's translation of Neamatulla P. 181.

¹⁹ Imp. Gaz. B.K. V. P. 48.

²⁰ Quoted by Bellew P. 69.

historians of the Arab conquest, viz., Baladuri²¹ and others do not mention anywhere that Khaled ben Waled invaded Persia or Afghanistan.

The Afghan story, that Khaled ben Walid invaded Afghanistan and on his return took Kaie and his tribal people to Medina, cannot be historically proved. The Afghan story itself of king Talut (Saul) and his family genealogy contradict the Jewish tradition. I have personally talked with a number of Afghans of different tribes on this subject. They all, with one exception, contradicted the story that they are of Jewish origin, and maintained that they had never heard this theory before, one of them belonging to a Malik (landed proprietor) family of the Afridi tribe was astonished to hear that the Afghans are supposed to be of Jewish origin.²² The man who had accepted the tradition confessed that he had learned it from books. Thus it seems this idea is not generally known, the illiterates know nothing of it. It is possible, as Bellue also thinks, that after the conversion of these mountainous people an Islamic priest may have invented and circulated this story with the idea of giving them — ancestry more in accordance with Islamic traditions. For this reason, this Jewish tradition may have been foisted on them — that the Afghans might be counted — a "people of the books" (*Alkitaabi*).

²¹ Al Baladuri "Kitab Futuh" or the Origin of the Islamic State.

— On the contrary, this Afghan informed me that he had heard from his father that the Afghans are of Hindu origin, and belong to

the same race as the people of the Punjab. The same statement was made by another young educated Afghan who informed me that the story of their Hindu origin is acknowledged by the frontier tribal people. Anyone who has seen the people of eastern Afghanistan cannot but be impressed with the fact that they have Indian affinities. The displacement of the tribes took place after the Ghaznvide conquest as mentioned in Neamatulla. For further information on this point see E. E. Oliver's "Across the Border."

A Pathan friend of mine argues that the tradition of Jewish origin must have some historical basis, for the tendency of a Mohamadan would be to claim an Arab rather than a Jewish origin. As a proof he points out that none of the Moslem people claim Jewish origin. But this objection seems to be tinged with anti-Semitism. On the other hand, Kumar Mahendra Pratab of Hattia, who has visited Afghanistan several times, tells me that the more he sees the Afghans in their homes, the more he is convinced of their Hindu origin. To him, the only explanation of the Jewish tradition lies in the fact that after the conquest of this mountainous region the Moslem conquerors made vigorous propaganda to break up the feeling of Hindu solidarity with that of India proper. And as a means to that end the story of Jewish origin was invented. The idea of Hebrew ancestry could not be repugnant to a Moslem, neither would he deny it, in case he belonged to that race as was evinced in the writings of the "Shubbiya movement" (see Goldzieher "*Islamische Studien*"). The Jews of Khaiber (Arabia) became Moslems without denying their origin. Moreover, Ferihta reports having heard that the Afghans are the descendants of a Pharaonic Egyptian and an Indian woman. This Egyptian was supposed to have been the only person saved from being drowned in the Red Sea while the Israelites led by Moses were being pursued by the Pharaoh. Thus miraculously saved, the Egyptian joined Moses's band, accepted the Hebrew religion and settled in the Sulaiman mountains where he married an Indian woman and gave birth to the Afghan race. These fantastic stories regarding their origin must have been invented to deny the Indian descent of the people of Afghanistan. In order to satisfy Moslem susceptibility an attempt was made to link the Hebrew tradition with the Arabian one. This kind of thing has happened

to many peoples converted to Islam. Even some of the Indian Mohammedans are not exceptions in this respect. A new story easily gains ground amongst ■ illiterate people. Indeed Bellew is right in saying that in order to efface all non-Moslem traditions of the people, the whole of the country under the Ghaznvide and subsequent rulers was turned into ■ wilderness.) India itself has not been immune from such acts of vandalism. In this way a great loss has been inflicted upon civilization by the destruction of "Gandhara Art" ■ which modern savants speak highly. The people of Afghanistan in modern times look with amazement at the artistic workmanship of their non-Moslem ancestors, and in their ignorance ascribe it to supernatural beings! Educated Afghans to-day are confessing their Indian ancestry. I have personally known such

The reports of the historians categorically contradict the story of the Jewish origin of the Afghans. All the reports testify that the peoples of this country were adherents of Brahmanism, Buddhism and Zoroastrianism, though the Jews ■ a people were not unknown there. Le Strange says, "As early ■ the 14th century (10th A.D.), the Moslems, the Jews, and idolaters, had each a separate quarter in Kabul" (*The Land of the Eastern Caliphate*, P. 349). The same author mentions that, according to Ibn Hawkal, "Ghor was infidel land, though many Moslems lived there" (P. 416). And this was the time when the Moslem invasion of India under the Gaznivides began to take place!

The Jews lived in Tokristan (modern Chinese Turkistan) before the Moslem invasion. (See the remains brought to the Berlin Museum of Ethnology by the German Turfan Expedition.) The Jews still live in Central Asia and as traders they are not unknown to the people of Afghanistan. This has been testified to me by a Central Asiatic Jewish merchant himself. Ferishta says the Afghans were finally converted to Islam in the fifteenth century. But the indigenous Indian religion lingered on the Indian frontier till the beginning of the nineteenth century. Biddulph in his "Hindu-Kush Tribes" mentions the death, that took place eight decades ago, of the last uncircumcised man of that region who ■ his death-bed asked his Moslem son to cremate his dead body! Nowhere in the history of this land do we hear of the report of a Jewish migration. So, the Afghan tradition can be categorically said to be a fabrication of post-Islamic days.

In short, when we trace the historical evolution of the peoples of Afghanistan, we find that the Sanskrit-speaking Indians, the Persians, the Bactrian Greeks, the Scythians, the Yue-Chi, the epithalite Huns, the Parthians and, in modern times, the Turks and other Islamic people as well as the Mongols, have played their historical roles in this mountainous part of Central Asia. By studying their genealogies, the ancient as well as the Arabian, we find that inspite of their supposed descent from the Jewish King Saul, different racial elements such as the Indian, the Tadjik, the Parthian and the Turkish, have contributed to make the modern Afghan.

In the Afghan traditions we find no mention of the invasions of these different races. To the Afghans the past history of their country is enshrouded in darkness, their written traditions claim that they were foreigners from Palestine who found the "Kafirs" (unbelievers) settled in the country whom they drove to the mountains after which they themselves took possession of the deserted land.

In order to approach the subject more closely we shall endeavour to make an anthropological analysis, leaving aside historical investigations. Here I shall take up the anthropological examinations of the various races in the order of their succession in history. With this point in view I shall begin with the Afghans.

3. Anthropological investigations.

A. The Afghans.

Very few anthropological measurements of the Afghans have been taken as yet. Risley measured some Afghans of the North-West Frontier of India and of Beluchistan, and here and there some anthropologists have measured a few Afghan individuals and skulls. No measurements have been taken from the interior of Afghanistan, and the whole stretch of that land is a *terra incognita* to the anthropologist. I have collected the data of somatic and craniometric measurements of the Afghans so far published and within reach of the public. An examination of these data will throw some light on the somatic composition of the inhabitants of Afghanistan.

1. Khanikoff²³ in his book, "The Natural History of the Iranians," published the measurements of the Afghan skulls lying in the museum of C. M. of Surgeon, London and in R. M. Hospital, Netley, England. The skull indices have been deduced by myself.

| No. | | Length | Breadth | Skull index |
|------------------------|----------------------|--------|---------|----------------|
| 5540 of Museum C.M. of | | | | |
| | Surgeon | 165 | 134 | 81.21 |
| 223 | Gilgee R.V. Hospital | 177 | 136 | 77.40 |
| 224 | " | 177 | 135 | 76.27 |
| 225 | " | 178 | 133 | 77.52 |
| 235 | ((Mooleh ?)) | 165 | 140 | 84.84 |
| 229 | " | 182 | 140 | 76.92 |

²³ Khanikoff—*The Natural History of the Iranians*, published by the Ethnological Society of London, New Series, Vol. 4, 1866.

Kommandant Dohousset has measured seven Afghans, whose average cephalic-index is given by Ujfalvy²⁴—

Ujfalvy, in the same book, has also given the average cephalic index of ten Khaiber Afghans,—

Bernard Davis²⁵ has given the skull-indices of six Afghans — follows :—

| | | | |
|----------|----------------------------|---|------|
| No. 1254 | Afghan from Yusufzai tribe | ♂ | 73.6 |
| 1255 | " " " " | " | 77.9 |
| 1256 | " " " " | " | 71.2 |
| 1448 | " " " " | ♀ | 77.9 |
| 1470 | " from Cabul | " | 88.5 |
| 1471 | " " " " | ♀ | 84.3 |

J. Grey²⁶ measured ~~some~~ soldiers of the "Coronation-Contingent"

| in 1903: | C. Index. | Stature |
|-----------------------|-----------|---------|
| 18 Afridis | 74.2 | 1769mm. |
| 15 Pathans or Afghans | 76.3 | 1782 " |

Khanikoff in his "*Memoire Sur L'ethnographie de la perse*" gives the cephalic index of seven Afghans who have been measured by himself. The indices have been deduced by myself from his data. These are :—

| | Length | Breadth | C. index |
|----------------------------|--------|---------|----------|
| 1. Man from Cabul (Kabuli) | 185 | 141 | 76.21 |
| 2. " Candahar (Kandahari) | 191 | 150 | 78.58 |
| 3. " " | 182 | 137 | 75.26 |
| 4. " " | 190 | 148 | 77.89 |

²⁴ Ujfalvy—*Les Aryens and Nord et au Sud de l'Hindoukouch*; 1896.

²⁵ Bernard Davis, *Thesaurus Craniorum*.

²⁶ J. Grey in *Man* Bk. III 1903, Vol. 1, 113, 201-245.

| | | | | |
|----|------------------------|-----|-----|-------|
| 5. | „ Candahar (Kandahari) | 185 | 187 | 74.05 |
| 6. | „ „ | 193 | 147 | 76.16 |
| 7. | „ ■ | 195 | 152 | 77.94 |

Quaterfages and Hamy give in
"Crania Ethnica" the measure-
 ment of an Afghan Skull taken Cep. index
 by lower. 80.47

Also the measurements of a skull found
 by Bellew in Bust near Candahar given
 in the same book.

C. L. Nasal Index

Risley²⁷ gives the average indices of
 eighty Pathans (Afghans) from the N.
 W. Frontier Province of India

| | Stature. | | |
|--------------------------|----------|-------|-----------|
| 80 Pathans (N. W. F. P.) | 78.5 | 68.4 | 1687 m.m. |
| (My calculations) | 73.43 | 65.62 | |

Further, he gives the measurements of Six
 Pathan (Afghan) tribes of Baluchistan, which will be
 dealt with by me when I deal with Baluchistan, also
 some of the Hazara tribe of Afghanistan who will be
 treated separately, since they are Mongols and not
 Afghans.

| | Cep. Index | Nasal Index |
|---|------------|-------------|
| E. T. Kitt. ²⁸ ■ measured ■ Pathans | | |
| 80 Pathans | 74.4 | |
| In W. Crookes ²⁹ "Tribes and Castes of N. W. P. and Oudh" vol. I, 1891, the anthropological data of Dr. Drake- Brockmann are cited. | 75.0 | |

²⁷ H. Risley *People of India* P. CIX. 1908.

²⁸ E. T. Kitt "Proceedings of Anth. Soc. of Bombay" quoted by

²⁹ W. Crookes in "Tribes and castes of N. W. Province and Oudh"
 Bk. I, 1891.

B. Hagen²⁰ gives the measurements of three Afghans taken in Batavia. 81.8 77.7
 B. S. Guha²¹ gives the Cephalic and Nasal indices of his Afghans measured in the region south of the Hindukush 72.76 60.70 and Karakorum mountain.

E. Von Eickstedt in *Man in India*, Vol III, 1923, gives the measurements of 11 Pathans of different tribes from North West Frontier Province of India and from the Punjab. As they are of different tribes their indices are given separately. The Cephalic indices have been deduced by myself from his data.

| No of Eickstedt's Subjects | Caste (tribe) | District of birth | Maximum Head Length. | Minimum Head Length. | Cep Index | Nasal Index. |
|-------------------------------|------------------|----------------------|----------------------------|----------------------------|--------------|-----------------|
| 58 | Asakhel | Peshwar | 182 | 142 | 73.96 | 57.0 |
| | Afridi | " | | | | |
| 59 | Mahmend | " | 184 | 143 | 78.8 | 56.2 |
| 60 | Isufzal | " | 188 | 155 | 78.28 | 59.7 |
| 61 | Buner | Hazara | 188 | 153 | 80.31 | 61.8 |
| ■ | Asakhel | | | | | |
| | Afridi | Peshwar | 207 | 155 | 74.87 | 63.3 |
| 63 | Bajori | " | 188 | 148 | 84.04 | 65.7 |
| 64 | Khabli | " | 197 | 145 | 78.60 | 65.7 |
| 65 | Jowaki | Kohat | ■ | 154 | 72.36 | 67.2 |
| 66 | Lohi | Nabha | ■ | 159 | 75.15 | 70.8 |
| 67 | Asakhel | | | | | |
| | Afridi | Peshawar | 184 | ■ | 76.98 | 74.3 |
| 68 | " | " | 200 | 145 | 72.5 | 60.0 |

By making an analysis of these measurements we find that out of six Afghan skulls measured by Khanikoff, two are brachycephals and four

²⁰ B. Hagen *Anthropologischer Atlas ostindischer und Melanesischer völker* 1898.

²¹ B. S. Guha *The Racial Composition of the Hindukush* in the Presidential address to the Indian Science Congress, 1938.

mesocephals (in this book the *Indices-division* of Rudolf Martin is used.) Regarding their origin, the tribe of the ■■■ to whom the skull of No. 5540 (a brachycephalic skull) belonged is unknown. The second brachycephalic skull (No. 235) belonged to a Mooleh. But an Afghan tribe of this name is unknown to me. Perhaps it is the skull of a Moslem priest (*Mullah*)! In any case it can be of a Tadjik, a Turk or an Afghan. Out of the Meso-cephalic skulls three come from the Giljee (Ghilzai or Ghilze) tribe, while the other is a "Moleh" skull which, ■ has been said before, is an uncertain nomenclature. As may be seen, the majority of the list is composed of Mesocephals, and the Giljee skulls fall into that division. This is noteworthy when we remember the question asked in the beginning whether the Gilzais ■ not Turks!

Also the seven Afghans of Dohassat are mesocephals, but on the other hand the Ten skulls of Ujfalvy are dolichocephals. Of six skulls measured by Davis two are (Nos. 1254 and 1256) dolichocephals and belong to the Yusuf-zai tribe, two (1255 and 1448) from the same tribe are mesocephals and of the remaining two (1470 and 1471), one is hyperbrachycephal and the other ■ brachycephal. These two skulls are of women from Cabul, and Davis himself asked the question whether these did not belong to the Tadjik tribe.

Grey's Afghans now come into question. His 18 Afridis (a tribe of Afghan) are dolichocephals and the 15 Pathans are Mesocephals. Here the

fact that draws our attention is that the Afridis who dwell in the North West Frontier of India are long-skulls. As regards the "Pathans" one does not know where they come from and to which tribe they belong.

Applying ourselves next to Khanikoff's seven Afghans, we see that one is a Mesocephal and comes from Cabul. The other six are from Candahar, two of them are dolichocephals and the remainder are mesocephals. I wish to draw attention to the fact that the Ghilzai tribe dwells in the province of Candahar, and some of the Ghilzai skulls considered above are mesocephals.

Here we see a likeness between the indices of these men of Khanikoff and those of the Ghilzais. Does it signify that the former are Ghilzais also.

Of the two skulls mentioned in "*Crania Ethnica*," one is brachycephal; the other is hyper-brachycephal. Their origin is unknown.

Then come the 80 Pathans of the Indian frontier measured by Risley.³² These Pathans or Afghans come from different localities near the frontier, viz, Peshwar, Bannu, Hazara and Dera Ismael Khan. This makes it clear that the subjects do not belong to one tribe.³³ Further, it is mentioned by Risley that these persons speak

³¹ B. Davis—*Thesaurus Craniorum*.

³² Regarding the individual see Risley's *Tribes and Castes of Bengal*, Vol. II.

³³ Risley—*People of India*.

Panjabee. That means that at least in the matter of language, they are under Indian influence.

I have made a biometrical analysis of the important measurements of the tribes of Afghanistan and Beluchistan — as far given in Risley's "*Tribes and Castes of Bengal*" and "*Anthropological Data of Baluchistan*." I have taken only the individual measurement given by Risley, the indices calculations have been made by me. In this book I have shown where my calculations differ from the figures given by Risley. By the comparison of the figures I have discovered some mistakes made by Risley. I think that in some cases his figures are rounded up. The biometric calculations given in this book are made by me, and I am responsible for it.

Pathan of the Western Punjab, now N. W. F. Province.

By a biometrical analysis of the measurements of the 80 Pathans mentioned above, we find, that the average cephalic index is 76.43 (Risley gives 76.5) with V (variation coefficient) is 4.551. Out of these 80 individuals 88.75% (32 persons) are dolichocephala; 48.75% (39 persons) are mesocephals and 12.5% (10 persons) are brachycephals.

The average nasal index is 68.62 (according to Risley 68.4) with $V=2.372$. 56.25% (45) — leptorrhina; 43.75% (35) are mesorrhina. The average maximum bi-zygomatic breadth index (according to Risley) is 185.0. The average stature index is 168.7 cm. The cephalic and nasal indices show a

correlation i.e. the broader the nose, the broader is the head.

The indices of the maximum bizygomatic breadth and the maximum cephalic breadth are correlated i.e., the broader the bi-zygomatic arches, the broader is the head.

We ■ from the analysis that the brachycephal element is very poorly represented in this group. The mesocephals number most but the dolicho- and the mescephals taken together (the dolichoids) form the majority. Regarding the nasal index, the leptorrhins ■ in the majority, though a large number of mesorrhins are also present. Taking these characteristics into consideration, this group seems to be *dolichoid-leptorrhin* and *above the middle stature* in height.

Then ■ the Pathans measured by Kitts and Drake-Brockmann. But the question arises here, what kind of Pathans ■ these? Are they the Pathans from Afghanistan or those Pathans who are natives of India? As the measurements of this group is given in this list together with those of many Indian groups I am, for lack of other proofs, inclined to consider them as Indian Pathans who have settled in India for centuries and ■ recognised as ■ group of Indian Mohammedans. Yet the question remains open, whether they ■ of Indian blood.

Both these Pathan groups are strongly dolichocephalic as is shown in their cephalic indices. Drake-Brockmann's Pathans are also leptorrhins. It seems to me that the strong dolichocephalic charac-

ter of these groups betrays their Indian origin. If their ancestors had really come from Afghanistan, there is no reference in history to show that they were accompanied by their wives.

Now we turn to Hagen's Afghans. The average cephalic indices of these three Afghans place them in the brachycephal group, and from their nasal indices they are mesorrhine. Thus, in total combination, they approach the border-land of mesocephaly and mesorrhiny.

Then we come to Guha's Afghans. They are essentially dolichocephals. Lastly, we come to Eickstedt's Pathans. The individual cephalic indices of ten of these Afghans place them in the dolichoid group, while the remaining one is a pronounced brachycephal. Regarding the nasal indices most of them are leptorrhine, while two are mesorrhine and one a chamaerrhin. Von Eickstedt observes²⁴ that in form the leptorrhine have "more or less convex noses - characteristics of the Armenoid race."

Thus we see, the Afghans, i.e. the Pushtu-speaking people, belong to the dolichoid (dolicho- and meso-cephal) group. If an arithmetical average of the cephalic indices given above be taken, (with the exception of the Indian Pathans) it would be found to be 72.0. This would signify that the Afghans on an average are dolichocephals; if the arithmetical average of the skull indices given above be taken, it would be found to be

²⁴ Egon Von Eickstedt—*A Comparative Anthropometry of 144 Pathans in Man in India* Vol. III 1923.

78.8. This signifies the mesocephalic character of these skulls. Thus, on an average, the Afghans are dolichoïd.

b. Tadjiks.

The second most important section of the population of Afghanistan is composed of the Tadjiks, an Iranian-speaking people of Central Asia. Many like Khanikoff regard the Tadjiks as the autochthones of this part of Asia.³⁵

Some Tadjiks have been measured by Ujfalvy and Fidchenko yet no Tadjik dwelling in Afghanistan has yet been measured. In *Crania Ethnica* the average indices of four Tadjik skulls measured by Ujfalvy — given as 82.81; the maximum bizygomatic breadth is given as 136. The nasal index (deduced by — from the measurements given by Ujfalvy) is 45.45.

The average Cephalic Index of 60 Tadjiks measured by Ujfalvy is 82.80 (84.30). Of these, Ujfalvy says "4 are dolicho-cephals, 4 sub-dolicho-cephals, 10 mesaticephals, 10 sub-brachy, 26 brachy (Vrais)"³⁶ We find also here that amongst 60 individuals 18 i.e. 30%, are dolichoïds, and 42, i.e. 70%, are brachycephals. It may be noticed here that amongst the Iranian-speaking groups also a large part is composed of the dolichoïd element.

Fidchenko³⁷ has measured 4 Tadjiks whose ave-

³⁵ Khanikoff, *Natural History of the Iranian* pp. 387-88.

³⁶ Ujfalvy, *Les Aryens Au Nord et Au Sud des Hindoukouch.*

³⁷ Badjanoff, *Notes Anthropométriques sur les Indigènes du Turkestan* L'Anthropologie, Book II, 1891.

rage cephalic index he gives as 84.25. Further, Bodganoff makes ■ note on it, that 48 Tadjik skulls measured by Fidchenko are in the average brachycephals (62.3) "with 10.4% dolicho- and sub-dolicho-cephals."²⁸

Guha has measured some Tadjiks, and he gives their average cephalic index as 83.12. Thus, they are brachycephals.²⁹

Thus so far ■ have seen that the Tadjiks are overwhelmingly brachycephals, though a certain percentage amongst them are to be found as dolichoids. The colour of their skin is brunette, and travellers describe them as having large noses.

c. The Hazaraks.

The next important section of the population of Afghanistan are the Hazaraks who have settled in that country in comparatively recent times. They have been measured by Risley.

| | | | |
|---------------|-------------|--------------|----------|
| 200 Hazaraks. | Cep. Index. | Nasal Index. | Stature. |
| | 85.0 | 80.5 | 1684 mm. |

This tribe is strongly brachycephalic, mesorrhin, and above medium height.

Risley has counted them as Afghans and reckoned them ■ belonging to his "Turko-Iranian" type. For the reasons given below I have not classed them ■ "Afghans," though they are the inhabitants of Afghanistan, but I would rather regard them as ■ separate people.

■ Ditto P. 75.

²⁸ B. S. Guha: *Racial Affinities of the Peoples of India* p. xiii in census of India 1931, Vol I. India pt. III. Ethnographical.

To me it appears that the head and nasal indices and the form of the face of this people betray their Mongolian origin which is also corroborated by the history of this tribe. According to Dorn⁴⁰ the Hazaraha — Mongols who, according to some, were transplanted to Afghanistan⁴¹ by Chengis-khan. Dorn cites the Moslem chronicler Fareeduddin Ahmed who says, "The Hazaraha came, in the time of Hulagu, to these parts and are settled by Ghazneen in Khandahar and the borders of Balkh."⁴² Dorn again, cites "Ansa-bnamah Afghinah" which informs us that the Hazaraha resemble the Kalmuks in their features, having narrow eyes and projecting faces.⁴³ The Mogul Emperor Babar confirms this by saying that "among the Hazaraha and Nekdari tribes there are some who speak the Mogul language."⁴⁴

Also in the "Ayeen-i-Akbari"⁴⁵ the famous statistical work of the Moghul Empire, Abul Fazl the author while describing the province of Cabul, which then belonged to the Moghul Empire, says, "The tribes of Hazaraha are the remains of the Chaghtai army which Mangi Khan sent into these parts to the assistance of Hulagu Khan." In Berlin I once saw amongst a group of soldiers who had

⁴⁰ Dorn's translation of Neamatulla's *History of the Afghans* p. 67.

⁴¹ Sultan Mohammed—*Life of Ascer Abdur Rahman*.

⁴² Dorn—Ditto p. 17.

⁴³ Dorn's translation of Neamatulla's *History of the Afghan* p. 67.

⁴⁴ Ditto p. 67.

⁴⁵ Abul Fazl *Ayeen Akbari* p. 177.

deserted from the British-Indian Army, a small man who appeared to me a Japanese. As the East-Asiatic cast of the face of this man attracted my attention, I asked an Afghan about him, and the answer I received was that he was a Hezarah!

The Hazarahs inspite of speaking the Persian language which they have accepted as their mother tongue together with the Shiah form of Islam⁴⁶ must be counted as a Mongolian tribe even though they have settled in Afghanistan. This is betrayed in their somatic characteristics and verified in their history.

d. Unimportant Tribes.

We come now to some small tribes, the Chaher Eimaks who speak a Persian dialect. No measurement has been taken of this tribe.

Then there are the Usbeks living in Afghan-Turkestan. Ujfalvy⁴⁷ has measured 78 Usbeks and found that they have an average cephalic index of 83.52 (84.02). They are brachycephals. Fidschenko⁴⁸ has measured 10 Usbeks from Turkestan whose cephalic indices are 83.1. Further he gives the cephalic indices of 41 Usbek Skulls as 68.4%. These are also brachycephals. Again, Guba⁴⁹

⁴⁶ Lassen : *Indische Altertumskund* Book I p. 425.

⁴⁷ Ujfalvy : *Les Aijens au Nord et au Sud de l'Hindukoush* pp. 387-388.

⁴⁸ Bodganoff : *Notes Anthropométriques sur les Indigènes du Turkestan* in "L'Anthropologie" Bk. II p. 76.

⁴⁹ B. S. Guba—*Racial Affinities of the Peoples of India*, p. xiii.

gives the average cephalic index of his Uzbeks as 85.42. They are also brachycephals.

There is also another tribe, the Kisilbashis, who are Persianized Turks. No measurement of these people is on record.

Thus we find that with the exception of a few tribes who dwell on the borders of the Kingdom of Afghanistan, the whole country is a *terra incognita* to Anthropology. By examining the Afghans we find them to be mesocephals, and by examining the Tadjiks we find that a dolichocephalic element is to be found amongst them. With this examination it is definitely ascertained that in these districts a large percentage of the dolichocephalic element is present.

c. The Hindukush Tribes.

The region of the Hindukush is of great importance to the anthropologist and the philologist. On the watershed of the Hindukush we find a division of the languages. In the north the Iranian language is extant,⁵⁰ while in the south and south-east dialects connected with Sanskrit languages are prevalent. Regarding these latter dialects, some are of the opinion that these are related to Sanskrit through various stages of evolution,⁵¹ while others, like Grierson,⁵² consider some of these dialects to form a special language-group,

⁵⁰ *Encyclopædia des Islam*.—*Ostiranische Familie* p. 165.

⁵¹ G. Leitner,—*The Languages and Races of Dardistan*, p. 11.

⁵² Grierson,—*The Pisaca Language of North Western India*.

called the *Pis'ācha* (in the Sanskrit it is known as *Pais'ācha* Prakrit). While recently Morgenstierne⁵³ has shown the essential Indian characteristics of some of those languages.

As this region is highly interesting from the philological stand-point, the case must be the same also from the anthropological stand-point. On this account an anthropological investigation of this region will be of great value to us.

It has already been said that the Iranian-speaking tribes dwell on the northern side of the Hindukush, and we shall apply ourselves at present to investigating them.

f. Iranian tribes.

1. Galtchas.

Ujfalvy⁵⁴ has measured 58 Galtchas and pronounced them to be "Brachycephales Vrais." The average Cephalic index of this group was 85.0 (86.50). One subject (1.72%) is "Dolico Vrai," five (8.12%) are "Sous-dolico," three (6.89%) — "mesaticephales;" in other words, ten are dolichoid, and forty-eight (i.e., 83%) are brachycephals (*Sous-brachy et Brachy Vrais*). Thus we find a large percentage of dolichoids; amongst the Galtchas; as we find 80% dolichoid element present amongst the Tadjiks, we find more of

⁵³ Morgenstierne, — *Reports of Linguistic Missions to Afghanistan and North Western India*, 1926 and 1932, Oslo.

⁵⁴ Ujfalvy, — p. 287-288.

⁵⁵ Joyce, — J. A. I. Book 33, p. 320.

⁵⁶ Bogdanoff, — *L'Anthropologie* Book II pp. 78-79.

brachycephalic element amongst the ormer than amongst the latter. In regard to the nasal index of the Galtchas, Joyce⁵⁵ finds 22.4% lepto-, 60.9% meso-, and 17.2% platyrrhina. But, on the other hand, Bogdanoff says, they are leptorrhina.⁵⁶

2. Darwazis.

Another Iranian group, the Darwazis, who — related to the Tadjiks have been measured by Ujfalvy.

15. Darwazi.....Cep Index 81.43 to 84.93).

As regards the formation of their nose, Ujfalvy says 10 are lepto-, 4 are meso-, and 1 is platy-rrhin.⁵⁷

g. Pamiris and neighbouring Tribes.

Various tribes living on the Pamirs have been measured. Below is given a list of them:—

| No. | Tribe | Cep. Index. | Nasal Index. | Stature. | Author. |
|-----|----------|----------------|-----------------|----------|-------------------------------------|
| 6 | Kafir | 66.9 | 68.9 | 167.1 | Risley ⁵⁸ |
| 1 | Kafir | 75.6 | | | B. Davis ⁵⁹ |
| 1 | " | 78.5 | | | " |
| 18 | " | 76.88 | 72.06 | 166.78 | Joyce ⁶⁰ & Stejneger. |
| 7 | Nagers | | | | |
| | Barishki | 75.4 | 63.3 | 164.8 | Risley |
| 9 | Hunza | | | | |

⁵⁷ Ujfalvy—pp. 174-175.

— Risley—*People of India* P. Cix.

⁵⁸ B. Davis—*Thesaurus Craniorum*.

⁶⁰ Joyce—J. A. I. Book XVI P. 469.

| | Burishki | 78.8 | 72.8 | 170.8 | " |
|-----|-------------------------|----------------|-----------------|--------------|--------------------------------------|
| 92 | Burusho | 77.45 | | | Dixon ⁶¹ |
| 18 | Burishkiin | | | | |
| | General | 77.2 | 68.2 | 168.8 | Biasutti & Dainelli ⁶² |
| 75 | Burusho | 79.3 | | | A. Stein ⁶³ |
| 22 | Chitralis | 80.26 | 64.27 | 168.45 | Joyce & Stein |
| 28 | Maatnji | 80.57 | 72.54 | 166.61 | " |
| 44 | Machnopa | 76.9 | 72.8 | 164.4 | Biasutti & Dainelli. |
| 40 | Sarikoli | 81.88 | 71.95 | 168.77 | Joyce |
| 25 | Pakhpō | 78.88 | 73.80 | 160.40 | " |
| 19 | Wakhi | 84.81 | 71.32 | 168.0 | " |
| 12 | Faizabdi | 85.97 | 67.83 | 166.92 | " |
| 290 | Kho | 76.80 | 60.70 | | B.S. Guha ⁶⁴ |
| | Kalosh | 71.75 | " | 1650-1,750mm | " |
| 100 | Red Kaffir | 72.72 | " | | " |
| No. | Tribes | Cep. Index. | Nasal Index. | Stature | Author. |
| 90 | Paharis | 69.88 | | | Ujvalvy ⁶⁵ |
| ■ | Pandit from Srinagar | 69.88 | | | " |
| ■ | Kashmiris in general | 70.52 | | | " |
| ■ | Baltis | 72.75 | | | " |
| 147 | " | 75.7 | 70.0 | 169.2 | Biasutti and |

⁶¹ R. Biasutti—*Balti e Ladachi* Rev. di Ante XX. 1-8 1916. Biasutti and Dainelli—*Spedizione Italiana de Filippi* II, IX pp. 79-299. G. Dainelli—*Spedizione Italiana de Filippi* Vol. VIII.

⁶² Quoted by B. S. Guha in *The Racial composition of the Hindu-kush* in the Presidential address of the Sec. of Anthropology of 25th Indian Science Congress.

⁶³ op. cit.

⁶⁴ op. cit.

■ Ujvalvy—*Les Aryans au Nord et ■ Sud de l'Hindu-kush*.

| | | | | | |
|----------------------------|---------------------------|-------|------|-------|----------------------------|
| | | | | | Dainelli |
| 5 | " | 74.9 | ■ | 161.4 | Troll ⁶⁶ |
| 49 | Brokpas | 75.2 | 70.6 | 163.4 | Blasutti and Dainelli |
| 56 | Pugiri | 75.25 | | | " |
| ■ | Bardons from Dardistan | 73.85 | | | |
| Skull from the Hindu-kush. | | | | | |
| 1. | 630B Yasin district | 75.1 | | | I. G. Garson ⁶⁷ |
| 2. | 630C " | 73.3 | | | " |
| 3. | 630D " | 75.8 | | | " |
| 4. | 630E Parpliah district | 79.5 | | | " |
| 5. | 630F Ghizar district | 71.5 | | | " |

This group shows that with the exception of the Sarikoli, Wakhi and Fuzibadi, all the groups betray their dolichocephalic character.

If any one makes an arithmetical average of the head indices of the subjects from the Pamirs who speak languages allied to the Sanskrit-Indian languages, viz., the Kafirs, the skulls brought by Garson from the Hindukush, the Chitralis, the Dards and the Brokpas, he will find it to be 75.0 i.e., the subjects are of dolichocephalic character. The Dards are pronounced dolichocephals; their relatives the Brokpas are less so; the Chitralis are mesocephals; the total average nasal indices of these groups ■ 67.5 i.e., they are leptorrhins. Besides there, there are ■ other Pamiri groups viz., the Nager, Hunza, Burishki Pakhpoo, Baltis whose average Cephalic index by taking all the tribes together would be 79.09 i.e. they are

⁶⁶ A. Troll,—*Individualaufnahmen Centralasiatischer Eingeborener* Zeitschr. f. Ethnol. 23., pp. 227-248, (1890.)

⁶⁷ I. G. Garson—J. A. I., II. 1889.

mesocephals. The Nasal index would be 69.81. This would class them as Leptorrhinus.

If, on the other hand, the Iranian-speaking groups be taken together, viz, the Mastoji, the Sarikoli, the Wakhi and the Faizabadi, then the cephalic index would be 88.15 and the nasal index would be 70.91. This will show them to be brachycephals and Mesorrhini. This is in opposition to our traditional knowledge regarding the Iranian-speaking people of this region of whom formerly only the Tadjiks and the Galtchas had been examined. Besides these, there are various groups in Kashmir and on the Indian side of this mountainous region who are counted as dolichocephals.

Thus we find that in these mountains there is a population speaking languages related to the Indian or language-groups allied to it who are somatologically dolichocephal-leptorrhini; also there is a group which does not speak any Indo-European language and are mesocephal leptorrhini; and finally, there is a brachycephal-mesorrhin population which speak the Iranian language. It is evident that no attempt is made here to identify language with race, particularly in this region the tribes change their mother language. This is the case with the Wakhis and the Sarikoli "where almost every man speaks Persian in addition to his native tongue"; also in the Swat, Kooner and PanjKorah Valley where many of the Dard tribes speak Pashtoo in addition to their own dialects.⁸²

⁸² Biddulph—*Tribes of the Hindukush*.

⁸³ Joyce—J. A. I. Book 33 p. 468.

By examining the above list we have seen that in the Hindukush, the Pamirs and beyond these regions, dolichoid elements are to be found. In the Pamirs, the dolichoid leptorrhin element is represented more or less by the tribes related to the Indians whose physical characteristics are described by Joyce as follows :—"Brown, Mesaticephalic, tall, prominent and aquiline nose, black wavy hair, dark eyes. This race may be termed the Indo-Afghan" (using Deniker's nomenclature.)⁷⁰

There is also a brachycephal-mesorrhin element, speaking the Iranian language which is described by Joyce thus : "A white rosy race, very brachycephalic, stature above average, with the prominent nose, varying from aquiline to straight, hair brown, usually dark, eyes medium in the main. This is Lapouge's "Homo Alpinus"⁷¹ Here I may say that I do not see the reason why these Iranian speaking people in general are spoken of as Leptorrhines when, according to the calculation of Joyce amongst the Galtchas 60.2% are Mesorrhine and 17.2% are Platyrrhine !

We have discovered in our investigation that the

⁷⁰ ditto.

⁷¹ Guha speaks of the integumentary colour of the Hindukush tribes thus : "All the tribes living in these regions appear in the main of white complexion but there is also a distinctly dark element present in varying degrees. The percentage of this latter is greater among the Pathan, the Kafir and the Badakshi, but considerably less in the others." As regards the eye-colour, he says, "the shades of the brown (Nos 1-6 of Martin) are undoubtedly preponderant." *Census of India*, vol. I, India pt. III. p. xix.

⁷¹ See my remarks above concerning this.

Afghans — Mesocephals, and including the examined Afghans from the Indian Frontier they are dolichoid (*dolicho* and *Mesocephal*)-*Leptorrhin* and of stature above the average. Also we have seen that some of the Hindukush peoples are *dolichoid* (*dolicho* and *Mesocephal*)-*Leptorrhin* and of stature above the average. Naturally, the tendency is to count both groups together which have some characteristics in common.

In the northern part of the Pamirs we have found — Iranian-speaking group which is *brachycephalic*, and of stature above the average, and described by some as *Leptorrhin* though I take it — *Mesorrhin*.⁷² Also, there is a population on the eastern side of the Pamirs which is *mesocephalic*, *leptorrhin*, and of average stature.

Besides these, there is a strong dolichoid element in India. The Indians in general are divided into *dolicho-leptorrhins* and *dolicho-mesorrhins*, and the *Chacerrhin* element is found general in the South. The stature of the dolichoid elements ranges between tall and average. But before we come to any conclusion, we must make an investigation of the races living in Baluchistan.

4. Ancient History of Baluchistan.

The early history of that part of the country which is now called Baluchistan is buried in dark-

⁷² The most ancient traditional name of the country — *Moka* — mentioned in the Behistun inscription. Herodotus called it *Mekia* or the land of the Myker, which belonged to the 14 Satrapy of the Achæmenid Empire (Ency. d. Islams P. 658).

ness. Perhaps it was a part of the Achæmaenidan.⁷³ During the time of Alexander's conquering expedition the darkness was somewhat lighted. The Macedonians called the Southern part of the country Gedrosia (present Makran).

Further information about the autochthones of this land has not reached us. Various attempts have been made to identify the present-day tribes with those that were mentioned by the Greeks. But these are hypotheses only.

The Arabian Geographers divided modern Baluchistan into four parts: South Afghanistan, Nudha or Bodha, Turan and Makran. Ibn Haukal called the inhabitants of Nudha — Nudha and Mand; but it has been proved that they were Jats.

Regarding the other living tribes or races dwelling there, Ibn Haukal⁷⁴ states that between Mansura (was it on the Punjab side of Indus valley?) and Makran the inhabitants were of — Indian tribe called Zats (surely Jats.) Those who lived on the other side of the North bank (the Indus) dwelt in huts like the Berbers. Another clan, the Kurds, live at — distance from the banks.

Hughes-Buller⁷⁵ says, "Scattered amongst the Brabuis to this day are to be found many Kurds, whilst Kurd is a generic term used in Sind and Las Bela for

⁷³ Elliot—*History of India* Book I. p. 387.

⁷⁴ Ibn-Haukal—*Kitab-ul Masalik-wa-Momalik*.

⁷⁵ Hughes-Buller—*Census Report*, Book V p. 84.

the Brahuis." N. L. Dames⁷⁶ says "There is still a powerful tribe amongst the Brahuis bearing the name of Kurd or Kird, and a clan of Kurds is even found among the Baluch Mazari."

An Afghan from Cabul informed me that there is a Kurdish tribe dwelling between Cabul and the Indian frontier. The question is raised thereby, whether these people who call themselves Kurds are, in any way, connected with the Kurds of Kurdistan, or is it perhaps a professional name of some kind?

Besides the Jats, the Meds have also been mentioned by the old geographers. In *Mujwat-Ul-tawarikh* it is written that the Jats and the Meds are the descendants of Ham the son of Noah, who have occupied the banks of the Indus.

From the Arab geographers the names of Jats, Meds, Afghans and Kurds have come down to us as the inhabitants of this land. The Arabic invasion led to the flood of migrations of which the Baluch immigration seems to be the last.

3. Anthropological data

a. The Brahuis.

The name "Brshui" is not mentioned either by the classical writers or by the Arab historians. Yet, for philological reasons, there is a general opinion that the Brahuis are an autochthonous tribe. As the philologists maintain that the Brahui language belongs to the Dravidian language group, therefore I have accept-

⁷⁶ N. L. Dames—*The Baluch Races*.

ed the belief — hypothesis that this tribe stands first in the list of the native tribes of Baluchistan, and for that reason I take it first in my anthropological examination.

The Brahuīs first appear in history at the end of seventh century. How the name Brahui originated, or wherefrom it is derived is not known. Some attempt to find its derivation from *ba-rohi*, i.e., "Mountain people" as distinct from the inhabitants of the Helmand, *na-rohi* i.e., people of flat land," others trace it to an eponymous hero Breho Oder Ibrahim. All these opinions are not very convincing. The Brahuīs themselves say they have come from Aleppo.⁷⁷

The Brahuīs — a mixture of independent and heterogeneous elements who hold together for protection against external enemies but have no unity amongst themselves when the cause of holding together ceases to exist. That they are conscious of their heterogeneity is evinced by the report that the former Khan of Kelat, the head of the Brahui Confederation, has given to the Census Officer.⁷⁸

In this report he states that the Ahmedzai and Iltrezai branches of the Kambrani tribe, and the Mirwani, Gurguari, Sumalani, Qualandrani (or Kalandrani, said to be the real Brahuīs from Aleppo), the Bangulzai, Langew, and Lehri were described as related to the Rinds i.e., the Balooches who according to the ex-Khan were settlers in Baluchistan before the Brahuīs came to that country. The Raiaini, the

⁷⁷ Denys de S. Bray—*The Brahui Language*. p. 3.

⁷⁸ Census Report p. 102.

Sarparra and the Shahvanni are Afghans, while the Kurds, the Mahammad Hasni or Mamasani are supposed to have come from Persia. The Bizanjs, the Mengels, the Sojdi and the Zehri are described as Jadgals or Jagdals i.e., Jats, but the chief of the Zehri according to the ex-Khan is Afghan. Finally the Mahammed Shahi and the Niehari are described as very old inhabitants of the land who had settled there before the migration of the Rinds.

The Brahui language has some relationship to the Dravidian languages of South India. Caldwell⁷⁸ says, "The Brahui language, considered as a whole, seems to be derived from the same source as the Panjabi and Sindhi, but it evidently contains a Dravidian element" Lassen⁸⁰ says it is similar to the South Indian languages and this view is confirmed by Trumpp.⁸¹ Stan Konow affirms that the Brahui is decidedly a Dravidian language,⁸² though foreign words from the languages of the neighbouring states, like Persian, Balooch, Panjabi, and others have been absorbed.

Risley⁸³ has taken measurements of the Brahuia. His data are given as follows :—

⁷⁸ Caldwell—*A Comparative grammar of the Dravidian or South Indian family of languages*. 1858.

⁸⁰ Lassen—*Untersuchung Über die ethnographische Stellung der Völker in Western Indiens in der Z. F. K. M. B. Book* pp. 377, 409 1844.

⁸¹ Trumpp—*Grammatische untersuchungen uder die sprachen der Brahoer in S.P.P. Und G. der K.d. A.W.* 2. p. 17, 1880.

⁸² Stan Konow—*Linguistic Survey of India* Bk. IV p. 27.

⁸³ Risley—*Peoples of India* p. CIX.

| Name | Place | Cep. Index | Nasal Index | Stature |
|--------------|----------------------|------------|-------------|---------|
| 198 Brahui | Sarawan | 81.5 | 70.9 | 1659 |
| 58 Lori | Quetta and Sarun (?) | 78.5 | 62.2 | |
| 77 Menge | Surma | 82.8 | 59.5 | |
| 21 Kalandran | | 82.0 | | |

The average indices of the Sarawan-Brahui group makes them *brachycephal-mesorrhin*, and of *middle height* in stature.⁸⁴

II. Lori.

The Loris have been called Brahuia by Risley and Gypsies by some. Some, again, hold the view that the Loris are of Indian origin. The curve of the Cephalic index runs in a zig-zag way, which shows the heterogeneity of this group. According to my calculation the Cephalic index is 78.8 with $V = 58.765$. Out of the 58 subjects measured 16(=27.58%) are dolichoccephals, 27(=46.55%) mesocephals and 15(=25.86%) brachycephals. These show that the majority are Mesocephals. The majority, viz. 74.13% are dolichoid; the round-skulled subjects are smallest in number.

The average nasal index is 61.62 with V as 12.714 out of these subjects 50(=86%) are Leptorrhines, 8(=13.79%) are Mesorrhines. The higher number of the variation coefficient of the nasal index in comparison with that of Head-index shows the larger amount of variability of the nasal index than that of Head-index.

⁸⁴ A biometric analysis of these data could not be made as the individual could not be had at hand at the place of writing the original manuscript.

The average maximum bi-zygomatic breadth index is 128.54. The range of variation begins with 110 (with one subject in fact it begins with 120) and ends with 140. The highest concentration area lies between 130 and 131. The correlation between the length-breadth index of the head and the nose shows that a correlation exists between the increase of the head-index and the increase of the nasal index i.e., the broader the head, the broader is the nose. The correlation table shows further, that 34 subjects are dolichoid-leptorrhine, 16 ■■ brachycephal-leptorrhine, and the rest are mostly dolichoid-mesorrhine. The correlation between the maximum bi-zygomatic breadth-index and length-breadth-head-index shows that the increase of the head-index means the increase of the bi-zygomatic breadth-index. With reference to these characteristics, one can say that in spite of the heterogeneity of this tribe, it has overwhelmingly *dolichoid-leptorrhine* elements within itself.

III. Mengela.

The Mengela form numerically the largest part of the Brahui tribe. The average cephalic index is 82.81 with V as 4.592. Out of the subjects measured 2(=2.5%) are dolicho-, 24(=30.95%) are meso-, 51(=66.11%) are brachy-cephale. The majority of this group is brachy-cephal.

The nasal index is 59.85 with V as 11.165. This shows ■ great variability. 67(=87%) are lepto, and 10(=13%) are Mesorrhine. The average maximum bi-zygomatic breadth index is 132.56 (Risley gives as 132.8). The largest variations are between 120 and 142, the

highest concentration ■ find with the index figure 130 or 131.

The correlation between cephalic index and nasal index shows that the smaller the head the broader is the nose. Amongst the 77 subjects measured 25 were dolichoid-leptorrhine, 42 brachy-leptorrhine, and the remainder brachy-mesorrhine.

The maximum bi-zygomatic breadth and the breadth of the head indices give the correlation that with the increase of the head-breadth indices, the increase of the bi-zygomatic breadth index goes hand in hand. In this tribe the Brachycephal-leptorrhine are in the majority.

IV. Kalandrani.

Of this tribe 21 individuals have been measured. The average cephalic index is 82.08 with V as 3.8.938. 8(=37.92%) are meso, 13(=61.07%) are brachycephals. The absence of the dolichocephalic skull is striking; the round skulls ■ in the majority. The nasal index is 61.0 (according to Risley 59.8) with V ■ 1.8003. This shows or discloses the least amount of nasal variability in this group; 18(=85.71%) are lepto, 3(=14.28%) are mesorrhine.

The maximum bi-zygomatic breadth index is 132.4. The variation indices vary from 120 to 145, but the largest numbers are to be found between 130 and 131.

The indices of head and ■ show a correlation between head index and nasal index. The higher the head index is, correspondingly higher is the nasal index. Amongst the 21 subjects measured; 6

are dolichoid-leptorrhins, 12 are brachy-leptorrhins, the remainder are dolichoid-mesorrhins.

The indices of the bizygomatic breadth and those of the head in opposition to my former findings are correlative in the form that the smaller the bizygomatic breadth, the smaller is the head. The number of the subjects of this group measured is very small, yet as the result of the examinations so far made one can say that this people belong to the *brachycephal-leptorrhin* type.

Thus we have found that the Brahuia are a conglomeration of heterogeneous racial elements. Amongst the Brahui-speaking people, there are dolichoid-leptorrhins, brachycephal-leptorrhins, dolichomesorrhins and brachycephal-mesorrhins. Of these elements, the brachycephal-leptorrhins seem to be in the majority then the dolichoid-leptorrhins in number.

The dolichoid-mesorrhins are very poorly represented amongst the Brahuia, and this fact we must bear in mind when we remember the opinion of the philologists that the Brahuia speak a Dravidian language. On the basis of this linguistic similarity many are of the opinion that the Brahuia have racial similarity with the Dravidians of South India, who are said to be dolichoid-mesorrhins.

b. The Jats.

| Name | Place | Cep. index. | Nasal index |
|-------------------|-------|-------------|-------------|
| 100 Jats (Risley) | Sibi | 79.8 | 63.8 |
| 48 Mir Jats | " | 81.3 | 62.7 |

Perhaps the first of the indigeneous races, that we meet in the history of Baluchistan are the Jats. They are known as an Indian people. They ■■■ to be found in the whole of the Indus-Valley, in Sindh, in the Panjab and in Rajputana. In Baluchistan they are to be met with in all the warmer regions. The Arab chronicler Masuni speaks of the Jats (Zat) who dwell in the neighbourhood of Kerman.⁸⁵ Those who ■■■ so counted in the *Baluchistan Census Report* of 1901, Book V, ■■■ not always real Jats. Hughes-Buller,⁸⁶ the writer of the *Census Report* says,—“The Jats who are recorded in the census papers, may be said to represent a congeries either of Mohammedan groups who ■■■ not Afghans, Baluch, Brabuis, or Saiyids, or of representatives of these who have fallen in the social scale and lost their nationality. Hence the term came to be used in some cases as equivalent to others and unspecified.” Again, “the Jats are not ■■ cohesive group, according to tribal rules, but live scattered in small groups.”⁸⁷

1. Jats Sibi.

The Jats of Sibi are “Jadgali,” i.e., the Jats of Baluchistan. 100 Jats of Sibi have been measured by Rissley. The average head index is 79.8 with V(=5.09.) Amongst these subjects 18(=18%) are dolicho, 36(=38%) ■■■ meso, 44(=44%) are brachycephals. The round

⁸⁵ Masuni—*French translation* III. p. 254.

⁸⁶ Hughes Buller—*Baluchistan Census Report* of 1901, p. 106.

⁸⁷ Ditto—*Ditto* p. 107.

skulls seem to be strongly represented, still more than half is dolichoid.

The average nasal index is 63.8 (Risley gives 63.1) with $V=11.02$. There are 80(=80%) lepto, 20(=20%) mesorrhin, the overwhelming majority is leptorrhin. The maximum bizygomatic breadth is 131.40 (according to Risley 131.3) the variation ranges from 120 to 148, with the area of highest concentration between the indices figures 130 and 131.

The correlation between the head and nasal indices shows the presence of a correlation between the high head index and high nasal index, i.e. broader the head, the broader is the nose. Amongst the 100 subjects measured 48 are dolicho-leptorrhine, 32 brachycephal-leptorrhine, 8 dolicho-mesorrhina, and 12 brachycephal-mesorrhina. A correlation exists between the head breadth and the maximum bizygomatic breadth index. In the average, this group can be called *dolichoid-leptorrhin*.

ii. The Mir Jats.

These Jats speak Jatki, a dialect of Sanskrit. The average cephalic index is 81.3 with V as 5.862. Amongst 48 persons 5(=10.97%) are dolicho, 16(=33.1%) meso, 27(=55.84%) are brachycephals. Here as well amongst the Jats of Sibi the round skulls are in the majority.

The nasal index is 62.0 with V as 4.2988. Out of these subjects 40(=83.33%) are lepto, 8(=16.66%) mesorrhins. The maximum bizygomatic breadth index is 132.43. The range variation begins with 120 (indivi-

dual) and ends with 140. The greatest frequency we find with 130-131.

The correlation of head and nasal indices show an inverse correlation between nasal breadth and head breadth, i.e., the narrower the nose the broader is the head. In this group 16 — dolichoid-leptorrhins, 24 brachycephal leptorrhins, 7 dolichoid-leptorrhins and 1 brachycephal-mesorrhin.

The maximum bizygomatic breadth and the cephalic indices show the usual correlation.

In the average, the *brachycephal-leptorrhins* are strongly represented.

c. Lasi tribes.

The great alluvial flat land of Las Bela is inhabited by different people, most of whom are related to the Indians. They, along with the other tribes of Indian descent, are the autochthones of Baluchistan. Their language is called Lasi, which is proved by Grierson to be a dialect of Sindhi. It is generally called Jatgali or Jagdali (the language of the Jats). The Chuttas with their branches, the Bandijas and the Sanghar (Sangur), live here. Some members of these tribes have been measured by Risley.

| Tribe | Place | Cep. index | nasal index |
|---------------|----------|------------|-------------|
| 38 Chutta Lok | Hisidan | 85.1 | 58.9 |
| 16 Sangur | | 86.38 | 64.68 |
| 35 Bandija | Kilalevy | 86.98 | 59.028 |

i. Chuttas.

The nucleus of this clan or tribe is derived from the Samras (originally Hindu Rajputs); but the ho-

mogeneity of the tribe was lost long ago. The average head indices of 33 subjects measured are 85.1 with $V=4.0118$. Out of these, 1(=3.03%) is meso, and 32(=96.96%) are brachycephal. The nasal index is 58.9 (according to Risley 58.6) with $V=10.117$ of these 31(=93.94%) are lepto, 2(=6.06%) — mesorrhina. The maximum bizygomatic breadth index is 132.18. The variation ranges between 124 and 141; the greatest frequency lies between 130 and 131.

The nasal and cephalic indices show the following correlation, viz. that the broader the head, the broader is the nose. In this group 1 is dolichoid (meso)-leptorrhin, 30 are brachy-leptorrhina, 2 are brachy-mesorrhina.

The maximum bizygomatic breadth and length-breadth cephalic indices show the usual correlation.

II. Sangur (Sanghar).

I could not find the names Sangur in the *Baluchistan Census Report*. The name of a tribe called Sanghar is given there which is counted amongst the the Lasis.⁸⁶ The average head-index of 16 persons measured is 86.38 with $V=3.9466$. Of these, 1(=6.22%) is meso, 15(=93.75%) are brachycephala. The average nasal index is 64.68 (according to Risley 64.5) with $V=7.518$. Of these, 12(=75%) are lepto, 4(=25%) are mesorrhina. The average maximum bizygomatic breadth index is 134.75. The variation ranges between 124 and 135.

The number of subjects measured is too small to deduce any final conclusion; but in general, on the

⁸⁶ I take it for granted that the Sanghar and Sangur are the same; the difference lies in writing the name differently.

strength of the existing data, it may be said that the Sangurs are a *brachycephal-leptorrhin* element.

iii. Bandija.

The Bandijas are one of the Lasi tribes which speak the Jadgali language. The average cephalic index of the 35 subjects measured is 86.98 with $V=3.6139$. In this group 35 (=99.708%) are brachycephals. The average nasal index is 59.028 with $V=8.9826$. Of these 33 (=94.28%) are lepto-, 2 (=5.714%) mesorrhins. The maximum bizygomatic breadth is 133.52. The variation ranges between 124 and 142. The greatest frequency is to be found between 136 and 137. The nasal and head indices show the correlation, that the broader the head, broader is the nose. Of the total, 33 are brachy-leptorrhins and 2 — brachy-mesorrhins. The correlation between the maximum bizygomatic breadth and length-breadth head index shows that the narrower the bizygomatic, the narrower is the head. The measurements so far taken show that this group is *brachycephal leptorrhins*.

Results.

Amongst the Lasi groups so far measured, we have — that long-skulls are not present. In spite of the supposed Indian origin the measurements show that amongst these tribes the brachycephal-leptorrhin element is in the majority. The first Indian people that — meet in the history of this country who are supposed to be indigeneous to the soil are composed of different racial elements. Amongst the Jats one portion is overwhelmingly dolichoid-leptorrhin; while with the Lasias the last element is very strongly represented.

The analysis shows that the present-day tribes, in spite of their linguistic relationships and traditions, are in any case to be regarded as heterogeneous irrespective of their origins. We have marked the same thing with the Brahuia who in spite of their supposed Dravidian language-relationships are also brachycephal-leptorrhine.

These investigations show that, the Brahuia, the Lasi tribes and a part of the Jats (Mir Jats) are related to each other with common (brachycephal-leptorrhine) racial elements.

■ Afghan Tribes.

We have already said that some of the Afghan tribes belong to the indigeneous populations of Baluchistan. Risley had measured some members of six Afghan tribes.

| Name | Place | Head Index | Nasal Index | Facial Index | Stature. |
|--------------|----------------|---------------|----------------|-----------------|----------|
| 100 Makhiani | Harnai-Tal | 78.5 | 59.2 | | |
| 50 Wanschi | Bibiban Tal | 79.27 | 59.86 | | |
| | Gotiali | 80.1 | 73.42 | 114.63 | 1679 |
| 100 Pani | Sibi | | | | |
| 100 Achakzai | Ohaman Quetta | 81.1 | 68.3 | | 1722 |
| | Pishin | 82.8 | 67.8 | | 1722 |
| 100 Tarin | | | | | |
| 112 Kakar | Quetta & Shoba | 81.9 | 69.6 | | 1683 |

Of the list the anthropological data of two tribes only were available to the author at the time of writing. The biometrical analysis of data of these two tribes is given below.

1. The Panis.

The Panis speak the Pushtu language and, accord-

ing to their tradition, are Afghans. The average cephalic index of the measured subjects is 80.1 with $V=3.6413$. Of these 4(=4%) are dolicho-, 52(=52%) are meso-, and 44(=44%) are brachycephals.

The average nasal index is 73.42 (according to Risley 73.0) with $V=9.837$; this would put them into the group of mesorrhina; but by making an analysis, it is seen that 35% are lepto, 55% meso, and 10% are chamaorrhina.

The average stature is 167.99 (according to Risley 167.78) with $V=3.434$. The range of variation extends from 1560 to 1790 mm. (the highest index figure of 1861 mm. is omitted — "individual freak" or a "sport"). It is to be seen in the curve of the stature that there are two highest summits, one of which is 1640 mm, the other is 1720 mm; and the curve extends up to 1861 mm. stature. By further reading the curve we see that there is a small summit at 1580 mm. index which falls in the small stature division, within the range of 1601-10 there is a second small summit which covers the "below average" group; the summit 1670 belongs to the "above average" group; then comes 1720 which covers the group "tall." The curve shows that this tribe is not homogeneous in stature. The strange thing that is to be noticed here is that amongst the 100 subjects measured there — 20 who betray the somatic combination of tall stature with brachycephalic.

The average of facial index is 114.82 (according to Risley 114.5). The maximum bizygomatic breadth index is 136.33. The range of variation extends from

126 to 146. The largest percentage we find between 134 and 135.

The maximum bizygomatic breadth and cephalic index show the correlation,—that the rounder the head, the broader the bizygomatics. The nose and cephalic indices show a correlation between nasal breadth (higher nasal index) and brachycephaly. In this group 20 subjects are dolichoid-leptorrhina, 14 brachy-mesorrhina, 8 dolichoid-chamaerrhina in this region. The high figure of variation of coefficients (V) of nasal index in relation to the large number of examined subjects confirms the variability of nasal index.

Thus we find, that in regard to the cephalic index of this group, the number of mesocephals is the largest, and in total the dolichoid element preponderates. Regarding nasal index the mesorrhina are in the majority. This people, according to its physical complex is extremely heterogeneous. It can be said that in average it is *dolichoid-mesorrhina*.

II. The Wanechis.

The Wanechis are another Pathan (Afghan) tribe of Baluchistan. The average cephalic index is 79.27 with $V=5.4323$. Out of 59 persons 14(=24%) are dolicho, 24(=40%) are meso, and 21(=35.53%) are brachycephals. Amongst this group the number of the mesocephals is the greatest, and that of the dolichocephals the smallest. But the dolicho and mesocephals together (dolichoids) form 64.37% and for that reason its number is twice as great as the round skulls.

The average Nasal index is 59.36, with $V(=11.728)$. Of the subjects examined 55(=93.22%) are leptorhina, 3(=5.084% are meso, and 1=94% chamaerhina. According to the data so far to hand this tribe is essentially leptorrhin.

The maximum bizygomatic breadth is 133.65 (according to Risley 133.1). The variation ranges from 120 to 145, with great frequency between 134-135. Between the Cephalic index and the Nasal index there exists an inverse correlation: the narrower the the broader is the head. In this group there are 34 dolichoid leptorrhina, 21 brachy-leptorrhina, 1 mesorrhine and 1 chamaerhin. With these results it may be said that this people belongs to the dolichoid leptorrhin group.

Result.

Our investigations have shown that, the Afghans are a heterogeneous people. With the two tribes investigated here the dolichoid head form is in the majority. This accords with the results of the measurement that have got of the Afghans from Afghanistan and from the Indian frontier, and also with the dolichoids of the Hindukush. Amongst the six tribes examined by Risley from Baluchistan, three (Achakzai, Tarin and Kakar) are to be classed as brachycephalic, with the exception of the Pasi tribe of Baluchistan. All Afghan tribes far investigated are leptorrhina and in this matter also there is similarity with the leptorrhina of Hindukush. All are of average stature with the exception of the Achakzai and the Tarin who are tall.

a. Dehwar.

| Name | Place | Cep. Index | Nasal | facial | Stature |
|----------------------|---------|------------|-------|--------|---------|
| Dehwar ¹⁰ | Mastung | 80.99 | 70.26 | 114.39 | 164.48 |

The Dehwars are neither Pathans nor Baloochis nor Brahuia though they live together with them. Their language is Iranic. 300 subjects from this tribe have been measured. The average head-index is 80.99 with $V=4.644$. Amongst these 28(=9.323%) are dolicho-, 101(=33.5%) are meso, and 171(=56.83%) are brachycephals. The round skulls are in the majority. The average Nasal index is 70.26 (according to Risley, 69.5) with $V=15.938$. Considering the large number of subjects examined, this figure is high and it shows the great variations of the nose that this tribe possesses. Amongst these 134(=44.66%) are lepto, 153(=51%) are meso, and 13(=4.33%) are chamaerrhina. Here again, the chamaerrhin element appears. The facial index is 114.39 (according to Risley, 113.9) with $V=6.3533$. The maximum bizygomatic breadth is 131.23 (according to Risley, 130.7). The range of variation extends from 113 (one subject not included here falls in the index 105) to 140. Beyond this, few indices appear in 144, 146, 160, 192, 231 which are not reckoned here, being considered as individual stray cases. The average of stature-index is 164.48 (according to Risley, 164.2). The curve of the stature shows that there is a complex "small" and a complex "under average." The latter is a summit of 1601 mm. The highest summit reaches 1650 and belongs to complex "average." Beyond this comes the division "tall." In average this tribe can be classed as of "middle stature or average."

¹⁰ Risley—*Anthropometric Data from Baluchistan*.

The correlation between the stature and cephalic indices show the following tendency, the greater the stature the rounder is the head. Here also — found round skulls with large statures. The curve shows that there — at least 3 groups within it. This indicates heterogeneity.

The breadth of the head and the maximum bizygomatic breadth show the usual correlation. The Nasal and Cephalic indices-correlation shows that the narrower the nose the broader is the head. In this group there are 20 dolichoid-leptorrhines, 20 mesocephal-leptorrhine, 74 brachy-leptorrhines, ■ dolicho-mesorrhines, 55 mesocephal-mesorrhines, 89 brachy-mesorrhines, 4 mesocephal-chamaerrhines and ■ brachy-chamaerrhines. Of these 300 subjects measured the largest number are mesorrhines.

On the basis of this analysis it may be said, that in total the *brachycephal-mesorrhine* element is dominant.

f. The Baloochis.

Historians are unanimous in their verdict that the Baloochis are the latest immigrants to this region. Though the country in modern times is named after them, they are not in the majority. We first meet them in the histories written by the Arabs in the tenth century, where it is mentioned that the Baloochis live in Kerman and South Persia. Istakhri⁹⁰ notes in his description of Sistan, that the provinces across this part of Persia (Provinces numbering 19 and 22 of the Empire of the Arab Khaliphate) were called the land of the Baloochis. Yakut says that the Baloochis

⁹⁰ Istakhri—translated by Moedtmann, P. 115.

resemble the Kurds and dwell in the region between Fars and Kerman. Ibu Haukal reports in the tenth century that the Baloochis dwell in "Iran Zamin" (land of Persia) which borders Hind and Sind.* Later, they migrated towards Mekran; and finally succeeded in penetrating the Indus Valley. Dames²¹ holds that possibly there have been three migrations of the Baloochis towards the Indian frontier.

Regarding the origin of the Baloochis various theories have been put forth, viz: (1) Turkoman, (2) Arab, (3) Rajput, (4) Iranian, (5) Turko-Iranian. The Baloochis themselves maintain that, according to their tradition, they have originated from Adippo,²² from where they were driven out by Yasia the second Umayyad-Khalif.

They have migrated to Baluchistan over Kerman. Philologists consider their language to be Iranian²³ which is merely related to the modern Persian. At the same time it shows similarity with the Zend, rather more to the old Persian. Dames²⁴ considers the Baloochis to be Iranians, descendants of the Tadjiks and the Galtchas. Lassen, Spiegel, Burton, and Trumpp ■ of the same opinion.

The Baloochis are ■ little homogeneous as the Brahuia. Strangers are taken into the tribal organi-

* The Arab Historians called the present day Afghanistan and India the *land of Hind and Sind*.

²¹ B. L. Dames, *A Historical and Ethnological Sketch on the Balooch Race*. pp. 33-34.

²² *Imperial Gazetteer of India*, Book VI.

■ W. Geiger—*Grundriss der Indischen Philologie, Die Sprache der Balutschen*, Book VI.

²⁴ Dames—p. 10.

zation of the Baloochia, viz: the important Baloochi tribe of Dodai, the name of which is not to be found in the geneology of the Baloochia and doubtless is of Indian origin, is affiliated to the Baloochi stock⁸⁵; also a few lower tribes who probably represent the four servile (*bolak*) tribes have been affiliated with the Baloochia. Again, the ■■■■ thing is true of the Gichkia, a tribe of Mekran, which now-a-days speaks the Balooch language and whose Indian origin yet remains fresh in their minds; and finally the Med, an autochthonous people who at present live in Mekran by fishing, is also classed with the Balooches, though the name "Med" is a contemptuous word.

Thus the Balooches are of heterogeneous origin. Each tribe forms a political and not an ethnological unit. Even when the nucleus of the tribe may have a common origin, the remainder is composed of affiliated individuals. The Rinds who are highly respected by their neighbours and with whom all other Balooch tribes wish to be related are also likewise heterogeneous in their composition.

| | Name | Place | Cep. Index. | Nasal Index. | Stature. |
|-----|------------|------------------------|----------------|-----------------|----------|
| 13 | Balooches | | | | |
| | (Grey) | | 83.4 | | 1749 |
| 271 | „ (Risley) | Murri & Bugti Hills | 80.4 | 72.5 | 1678 |
| 80 | „ | West Panjab | 80.13 | 69.57 | 1678 |
| 79 | „ | Mekran | 81.9 | 68.45 | |

i. Balooches from the Panjab.

The Balooches of the Panjab measured by Risley

⁸⁵ *Ditto*, p. 37.

have an average cephalic index of 80.13 with $V(=2.1004)$. Of 60 measured subjects 13.33% are dolichocephals, 45% are mesocephals, and 41.66% are brachycephals. The Mesocephalic is dominant, and the dolichoid element is in the majority. The Nasal index is 69.57 with $V=2.7074$. Of these subjects 32(=53.33%) are leptorh., 27(=45%) are mesorh. and 1(=1.66%) is chamaerrhin. Here we notice that mesorrhine is in the majority, and again we meet with the chamaerrhinio. The average of the maximum bizygomatic breadth index is 133.6; stature according to Risley is 166.2. Maximum bizygomatic breadth and the head breadth show the usual correlation.

The correlation between Nasal and Cephalic indices is,—the narrower the nose the broader is the head. In this group there are 18 dolichoid-leptorrhina, 14 brachyleptorrhina, 16 dolichoid-mesorrhina and 1 mesochamaerrhin. The leptorrhina are most strongly represented amongst them; the dolichoid-leptorrhina are the largest group.

Finally it may be said that the *dolichoid leptorrhina* forms the majority in this group.

11. Other Balooches.

Risley has further measured 271 Balooches from the Murri and Bugti Hills. As the individual anthropological data were inaccessible at the time of writing this, a biometric analysis could not be made here. On the basis of the average indices⁹⁶ given above it may be said that these Balooches on

⁹⁶ Risley—*Peoples of India*.

the average are *Mesocephal Mesorrhine* and their stature is above the average height.

Grey has measured 13 Balooches from the coronation-contingent brought to London, whose average cephalic index is 83.4 but whose nasal index and the place of origin have not been given. The high stature of these subjects may be accounted for by the fact that these persons were chosen soldiers brought to London for parade exhibition. These subjects were *brachycephals*.

iii. The Meds.

The Meds are called by Risley²⁷ as the Balooches of Mekran. But I have already shown, that they ought to be considered as an indigenous tribe of Mekran and that in spite of speaking the Mekran Balooch language, they cannot be regarded as representatives of the Balooch race.

The average cephalic index of 79 measured subjects is 81.9 with $V=4.4017$. Of these 3 (=3.78%) are dolicho-, 28 (=35.42%) are Meso-, and 48 (=60.29%) are brachycephals. The latter are in the majority.

The average nasal index is 68.45 (according to Risley, 68.1) with $V=11.098$. Amongst these, 44 (=55.6%) are lepto-, 32 (=40.506%) are meso-, and 3 (=3.79%) are chamaerhine. Thus half of the number is leptorrhine. Here, again, we meet with chamaerhiny. The maximum bizygomatic breadth index is 132.59. The variation ranges from 120 to 144. (In one case the index is 148). The greatest concentration is found between 134 and 135.

²⁷ Risley, — *Anthropometric data from Baluchistan*.

The correlation between nasal and cephalic indices stand thus : the narrower the nose the broader is the head. Among this group there are 16 dolichoid-leptorrhina ■ brachy-leptorrhina, 16 dolichoid-mesorrhina, 15 brachy-mesorrhina and 3 chamaerrhina. The largest group here is formed by brachy-leptorrhina. The majority of the subjects of this tribe can thus be characterized as *brachycephal-leptorrhina*.

Results.

Thus it is found on investigation that the Balooches are heterogeneous. The Balooches from the Western Punjab essentially show dolichoid-leptorrhin characteristics, the Meds brachycephal-leptorrhin and the Balooch tribes from the Murri and Bugti Hills mesocephal-mesorrhin characteristics. Hence, there are different racial elements amongst the Balooches. The Meds ■ similar to other Baluchistan tribes and Races in being brachycephal-leptorrhina. But the Balooches from the Western Punjab as well as the Baloochis of the Murri and Bugti Hills betray their dolichoid characteristics. Wherefrom comes this difference? According to Risley, the Punjab in general is peopled by long-skulled persons. This may influence the Balooches of that place. At least the language of the Punjab has had influence on them; these Balooches do not speak their own language, but a dialect of western Punjabi. The dolichoid-mesorrhine characteristic of the Baloochis of Murri and Bugti may be explained by the hypothesis that these people have Indian or Persian blood in their veins, ■ in the neighbouring Indian provinces the dolichoid-mesorrhina are in the majority, and ■ think that in Persia such an element is also to be found.

(To be continued).

NOTES AND NEWS.

In his Presidential Address to the Anthropological Section of the *British Association for the Advancement of Science*, at its annual meeting on August 31, 1939, Prof. W. E. LeGros Clark, F.R.S., took for his subject "*The Scope and Limitations of Physical Anthropology.*" Prof. Gros Clark reviewed briefly "the present position to which Physical Anthropology has brought us in the study of the Origin of Man in the past, of his differentiation into the variety of races or ethnic groups which are dispersed over the world to-day, and of his potentialities for the future."

From up-to-date anatomical data, Prof. Clark suggested that it is probable that "Man diverged from the anthropoid ape stock at a time when the common ancestors were relatively small and agile animals, that is, before the weight of the heavy body adapted for brachiation in the trees might have led to secondary distortions of the foot skeleton." "The very fact that parallelism has occurred between Man and the apes indicates that they are *ultimately* derived from a common ancestral stock which endowed them with similar evolutionary potentialities." To the question whether we are likely to gain any more certain knowledge regarding the genetic affinities of Man and the anthropoid apes by further comparative anatomical studies of existing forms, Prof. Clarke is inclined to give a negative reply. All that the evidence of the comparative anatomy and comparative physiology of existing primates points to is that the "higher

primates possess certain features in common which indicate community of origin at some phase in their evolution, but that many of the resemblances shown by different genera may be the result of evolutionary parallelism." As regards the skeletal evidence of human evolution, early types of mankind like *Pithecanthropus* and *Sinanthropus* had, by the beginning of the Pleistocene, already acquired the shapely limbs of modern Man and that modern Man was derived, not from the extreme Neanderthals of later Mousterian, but from generalised types of earlier date. Much is to be learnt from the study of endocrinal casts of fossil skulls, but it is extremely difficult — perhaps even impossible to infer the convolution pattern of the brain from the cast. The studies of the skeletal evidence of individual human fossils have shown that the earliest known types of man were not the large and strong people they — popularly supposed to have been but rather under-sized and narrow-shouldered individuals. Many surmises from the study of the skeletons — to the sex of the living individual — of doubtful value, and it is also not possible to assess the intelligence of a normal human individual by reference to the cranial capacity.

As for the study of blood-group distribution, although it has provided a good deal of information regarding racial relationships and racial movements, yet the results have so far been rather disappointing, because, in the first place, "although blood-groups may in themselves have no selective value — regards survival, they may possibly be genetically linked to — racial character which is selective,"

and, in the second place, "identical blood-groups may appear independently of each other in different parts of the world as the result of parallel mutations." The occurrence of parallel mutations in human evolution also introduces difficulties in the task of assessing racial affinities. As regards the limitations of cranio-logy, it is pointed out that "the range of genetic variation in Man is probably unique among animals, that the degree of miscegenation in human populations has been very extensive over almost every part of the world from great antiquity, and all the characters of the bony skull, even if they have a genetic basis, are at least to some degree susceptible to environmental influences, and that it is by no means easy to collect sufficient well-preserved and properly documented skeletal material for statistical study." On the other hand, "in the study of the living, the sex, blood-relationships, nationality, language, religion, and social status are known" so that "all the material which can be required is already there, available for the physical anthropologist who chooses to take advantage of it rather than to wait for the accidental discovery of some ancient cemetery which may provide him with material which is usually rather unsatisfactory and inadequate." The study of the bodily changes which man has undergone in the past gives a clue to the nature and extent of the changes which may be anticipated in the future. *But what is far more important for the purpose is the study of Man as he is to-day.* Sociological problems are becoming more and more forced on our attention which demand for their solution ■ conscious control of processes which

have hitherto been left to chance. The improvement of health and physique and their relation to nutritional and climatic factors, the effects on physical type of the redistribution of the populations of the world, the results of the hybridisation of different racial types, the relation of changes in the reproductive rate to human variability and the composition of regional populations, all these are practical problems which can be approached systematically and scientifically only if we have adequate data regarding the physical nature of Man in the condition under which he now lives."

Again, "a study of the normal variability of Man to-day and of his bodily reactions to environmental influences, must always be a necessary basis for any assessment of changes which are to be anticipated in the future. The study of human *genetics* offers practical problems of considerable urgency, for no one doubts that the mode of transmission of hereditary defects, which may be manifested in structural abnormalities, metabolic disorders, or susceptibility to diseases of one kind or another, should be elucidated in all possible detail." "The field of human genetics offers unusual opportunities to the physical anthropologist for applying his own particular methods of enquiry, for the reason that the study of heredity in Man cannot be pursued by the direct experimental methods employed for the study of animal genetics. Statistical methods are necessary for determining the frequency and distribution of the characters under investigation; different groups of the population must be studied under different conditions; pedigrees require to be followed and analysed (a field of work sometimes

spoken of as 'family anthropology'); and advantage must be taken of the opportunities offered by the phenomenon of twinning."

"The question of the possible linkage of phenotypic characters is another problem of human genetics which demands intensive investigation, since this phenomenon may permit the recognition of latent defects in ■■■■ where they are linked with a physical trait detectable by superficial observation or appropriate measurement. The possible relation of physique to susceptibility to disease is particularly important. Doubt still applies to the supposition that certain racial types are particularly susceptible to infections of some kind or another (*e.g.* that the Negro is specially liable to tuberculosis). The possibility of a genetic linkage of characters also raises the question how far inherited physical traits may be related to an inherited mental disposition." In spite of such statements as that the Mediterranean race is volatile and frivolous in temperament, has less sense of truth and honour than the Nordic, and, in respect of rational endowment and character occupies an intermediate position between the Nordic and the Negro, and that the Nordic ■■■■ is 'endowed with creative energy, with ■ vigorous imagination, high intelligence, and an unusual degree of self-control,'—the evidence for their truth is remarkably unsatisfactory, and "certainly a great deal of careful work must be accomplished before they can be accepted." Similarly such questions as the significance of the racial factor as ■ basis ■ cultural development or the existence of a genetic factor in criminal tendencies still await answers based on satisfactory evidence.

The relation of different racial types of physique to diet was first demonstrated by the experimental work of Sir Robert McCarrison among the races of India among whom a definite correlation was found to exist between physical type and the presence or absence of certain food factors in the diet to which a race is accustomed. "If we are to obtain a really adequate somatometric index of malnutrition, some method of nutritional assessment more objective than clinical observation must be employed with which to equal physical measurement. In the matter of scientific observations on the relation of nutrition to physique, capacity for work, and susceptibility to disease, "the field anthropologist must necessarily give his aid, since he is in the best position to obtain a detailed record of the food elements of the native population...To carry out nutritional surveys in native populations, the physical anthropologist will also require to examine the somatometric indices which have been worked out by reference to European peoples, for they will probably need modification to adapt them to different types."

INDIAN ETHNOLOGY AND GENERAL ANTHROPOLOGY IN CURRENT PERIODICAL LITERATURE.

Man for July, 1939, contains the summary of a Communication by Dr. H. Meinhard. After giving a description of the *Wayang purwa*, the Javanese shadow-play, and a review of opinions as to its original character and provenance, the paper deals with the ancient Indian shadow-theatre, the *Chāyā-nāṭaka*, and ends by communicating some evidence of its continued existence down to the present time, such as the popular shows of leather puppets (*chhakkaladagombe*) or of wooden marionettes (called among the Kanarese-speaking people *sutradagombe* and in Deccan the *Katbu*). It may be noted that similar exhibitions of wooden puppets joined together with wires or strings (*sutra*) were until recently in vogue in Bengal and known as *chhāyā-bāji* (shadow-play). Dr. Meinhard suggests that "it was probably at a very early time, that the Indian proto-types of the *Wayang purwa* and the *Wayang-beber* found their way to Java." We join with him in regretting that next to nothing is so far known of the Indian shadow-play and cognate artistic forms, and the customs, rites and beliefs connected with them. We expect some of our anthropological students in the Calcutta, Lucknow and Bombay Universities might feel attracted to the study of the growth, distribution, and decay of the Indian Shadow-play and analogous plays whose origin appears to go back to at least the second century B.C. as Pischel and Liders have shown, and from which (shadow-play) the classical Indian drama appears to have sprung.

In the ■■■■ number of *Man*, Clyde Kluckhohn discusses the "Theoretical Bases for an Empirical Method of studying the Acquisition of Culture by Individuals." He contends that heretofore we have been too often content with purely formalized description which gives in effect, simply the ideology of the culture—perhaps as conceived by ■ few informants; "the highly meaningful question of 'goodness' of fit between theory and practice has almost entirely been passed over." For a satisfactory intellectual grasp of the behaviour in question, therefore, we need "concrete data indicating what proportion of the actual individuals in the tribe in question follow out more or less the letter of the ideal pattern, what proportion deviate somewhat (and in what directions), what proportion disregard the ideal pattern almost entirely." "Sweeping generalisations have little scientific meaning unless ■ ■■ given controls, unless we are given some indication of how many concrete observations formed the basis for such statements of uniformities." We need factual "control information" that will enable us to differentiate between "generalizations based upon statement, generalizations based upon both statement and observation."

Even in numerically small and remarkably consistent and coherent societies, there are "variances and co-variances" in the responses to the same situation, and therefore these and their frequency distributions must be taken into account. "Even in relatively homogeneous non-literate societies differences in the behaviour of individuals cannot be fully explained in

terms of age, sex, and other factors upon which sociological status and role depend." Range of variation (in ideology, in practice, and in divergence between these two) is sufficiently significant to make consideration of the sampling process vital."

"In respect to any particular class of behaviour, the range of variation, the frequency distributions, and something comparable to the 'standard deviation, must be indicated, even though in many cases the data can provide only the roughest of first approximations to these categories." It is not adequate for a field-worker to assure us that a specified response is 'typical.' "We must know clearly upon what more or less objective ground we stand at every point of the presentation." "Impressions hunches, and the like must be labelled as such."

In this way, "anthropology must supplement its extensive excursion with more intensive penetrations."

In *Science and Culture*, for September 1939, Lt. Col. D. H. Gordon in the first instalment of an article on "Rock Paintings," discusses the Date of the Singanpur Rock Paintings," and comes to the conclusion, firstly, that "what evidence there is indicates a date of about 600 B.C. to 200 B.C. for these paintings,—secondly, that though the microliths (found at Singanpur) may be contemporary with the paintings, this is not necessarily so, as such microliths are widespread over the north of India, and are found at Pancharabi in connection with shelters that have no paintings and in the Ajanta Ghats where they are usually unassociated with shelters at all,—thirdly, that it is unlikely from the evidence that is available in the Mahadeo hills that either the microliths or the paintings are of European palaeolithic date; and finally that mammoths, glyptodons, proto-Indian Scripts and all such strange fancies find no place in this connection in the more prosaic realms of fact."

In the October (1939) issue of the same journal, Lt. Col. D. H. Gordon contributes the second instalment of his article on "Indian Rock Paintings" and deals with the rock paintings of Kabra Pahar in the Raigarh State (to which Singanpur also appertains), which resemble quite strongly the early series from the Mahadeo hills, but the microliths found here might "quite well date to the 1st century A.D."

The September and October (1939) issues of the same journal contain in two instalments a popular article on "Mohen-jo-Daro" by Mr. C. R. Roy.

In the *New Review* for September, 1939, Mr. W. Koppers contributes an article, "The Mundas and the Sidoli Feast of the Korowas: On the Traces of the Ancient *As'vamedha*." The 'Mundas' spoken of in this article does not refer to the Munda tribe but to the carved memorial posts erected by the Munda-speaking Korku tribe of the Central Provinces and Berar, and the 'Sidoli' feast is celebrated on the occasion of the erection of a 'Munda' in the memory of a person of importance in the Korku tribe. The author collected his account from the Korkus at Chikalda near Ellichpur in Berar. From the fact that the 'Munda' often bears the carved figure of a horseman, Dr. Koppers concludes that "with the *Sidoli* feast we are on the traces of the ancient Indo-Aryan horse-sacrifice. Every scientist acquainted with the sacrificial rite will agree with this connexion... This much is certain that those are evidently non-Aryan elements in the *As'vamedha*, some of which may have been developed and taken over only very late in India." Of the points of resemblance between the *As'*

vamedha and the *Sidoli* feast, the author refers to the following facts : (1) As only a rich and powerful king could undertake the *As'vamedha* since it was very expensive, so too, among the Korkus only a wealthy man may organize the *Sidoli* feast and erect a *Munda*; (2) It includes lavish banquets and meals; (3) It is interwoven with erotic rites; (4) The 'Munda' post itself often bears the carved figure of a horseman.

In the November (1939) number of the same journal appears an article on "The Origin of the Idea of God" by S. Fuchs, and one on "Indian Magio" by C. A. Dobson, and a third on "A Mohenjo-Daro Figure" by G. M. Moraes. The first of these articles gives a short popular account of the different theories on the origin of the idea of God. The second article narrates three remarkable instances of 'magical' exhibitions by Indian wonder-workers for which the only explanation that he can think of is "hypnotism." The third article seeks to refute the identification (suggested by Dr. B. A. Salatore in the July number of the same Review) of the *yogi* figure on a Mohenjo-Daro seal, with the Aryan god Agni, and adduces reasons for identifying it with Siva who, he suggests, was originally a phallic deity of the Proto-Dravidian tribes of the Indus Valley who, in their turn, had probably borrowed it from the Kavals who were probably 'Kolarian' or Austric in origin."

In the December (1939) number of the same journal, Mr. A. B. D' Souza contributes an article on Religion in which the author criticizes as inadequate, the theory advanced by Prof. John Macmurray's thesis advanced in his Lectures on "The structure

of Religions Experience," viz., that "Religion is a social function born of a social necessity." Mr. D. Souza in this article maintains that "though social life is dependent on religion, and *vice versa*, to a certain extent, social life cannot wholly explain religion; the primary religious instinct is that of dependence on superhuman powers. To attempt to change this instinct, or to make disbelief rule the roost, is to turn the Cosmos into Chaos; it is to open the door wide to the extremes of Racism, and perhaps even to make Racism itself a religion."

The *Quarterly Journal of the Mythic Society* for October, 1939, contains an article by Dr. R. N. Saleore on the "Abhiras in the Deccan," and continuations of the late S. C. Mitra's articles on "Studies in Bird-Myths" and "Studies in Plant-Myths."

The *Year-Book of the Royal Asiatic Society of Bengal*, Vol III, 1937 (issued July, 1939) contains the Annual Address of the President Sir John Anderson. The subject of the address was "The Conception of Power in Social Organism."

In the same Journal, Vol. IV, 1938, (issued in July, 1939) Mr. S. Varma contributes an article on "The Dialects of the Khasati Group," Mr. C. C. Das Gupta contributes a "Bibliography of Ancient Indian Terracotta Figurines," and also describes "A Type of Sedentary Game prevalent in the U. P.," and Mr. M. B. Emeneau describes "Kinship and Marriage among the Coorgs."

In the same Journal, Vol. IV, 1938, no. II (issued August, 1939) Capt. G. M. Ambler contributes "A Vocabulary of the Mawkhen Salon or Sea-Gypsy

Language of the Mergui Archipelago," and Mr. N. L. Bor contributes a "Yano Daffa Grammar and Vocabulary," and Mr. J. M. Datta describes a new type of Mughal Pathan diagram of an old game.

In the *Annals of the Bhandarkar Oriental Research Institute*, Vol. XX (1938-39), Mr. A. P. Karmakar discusses Dr. Sukthemkar's *Theory of the Briguisation of the Original Bharata and the light it throws on the Dravidian Problem*, Mr. S. M. Katre continues his article on "The Formation of Konkani", Dr. D. S. Trivedi advances a plea for the claim of India to be "The Original Home of the Aryans", and Dr. Mrs. Irawati Karve contributes the first instalment of a paper on "Kinship Terminology and Kinship Usages in Rigveda and Atharvaveda".

In the *Journal of the University of Bombay* for September, 1939, Miss D. N. Bhagvat discusses the "Origin of Indian Monachism" (religious mendicancy) and comes to the following conclusion;" (1) From the *Samhitās*, the positive existence of asceticism cannot be proved; (2) The evidence of the stone statuette of Mohenjo-Daro is also not to be relied upon to prove the existence of pre-Vedic and non-Aryan asceticism; (3) The reference to asceticism in the *Brahmaṇas* are ——— reliable, and hence it will not be unreasonable to trace the origin of asceticism to this source; (4) The perfect ascetic philosophy of the *Upanishads* makes the claims of asceticism on the cultural life of the Hindus very strong until at last they ——— recognised by the worldly-minded law-givers in the four stages of life."

In the July (1939) number of the same journal Dr. G. S. Ghurye gives an account of his excavations in two old sites in Kathiwar, in which old pottery, fragments of bangles of crude glass, ivory, stone and conch-shell, besides stone beads, cores and stone, flints were found.

In the *Journal of the Annamalai University*, for June, 1939, Mr. E. S. Varadarajan contributes an article on "Ancient Tamilian Worship," in Tamil. It is desirable that an English version of the article may be published for the benefit of readers ignorant of Tamil.

In the *Modern Review* for September, 1939, Prof. S. R. Das contributes an article on the "Significance of Durga, Siva and Kali." The author seeks to show that astronomical facts have been linked with an interesting myth in the Durga festival to capture the imagination of the common people.

In the October (1939) number of the same Magazine Mr. D. C. Kaith gives a popular account of the life of the "Hill Tribes of Assam."

In the December (1939) number of the same journal Mr. Devendra Satyarthi gives a short account of the folk-songs of the Simla Hills under the caption "The Singing People of Simla Hills."

In the November number of the same journal Mr. G. S. Dutt, in an article on "Indus Civilisation Motifs in Bengali Culture", attempts to show that some features of the folk culture of Bengal (such as lotus-flower *alpana* designs — tridents surmounting Siva temples "certain Scroll-paintings and dolls,)

are in direct traditional continuation of the Mohenjo-Daro civilization.

In the *Journal of Indian History* for August 1939, Dr. H. D. Sankalia contributes ■ illustrated article on "Six different Types of Ganeśa Figures".

In the *Bhāratiya Vidya*, Vol. I, Part I (Nov, 1939), Hon. Mr. K. M. Munshi contributes an article on "Fundamentals of Aryan Culture," the Editor Dr. Manilal Patel gives ■ "Interpretation of the Rig-Veda" and lays stress on the importance of knowing the language and the thought of Avesta, particularly its oldest portion—the Gathas, on the ground that "the linguistic phenomena, vocabulary, phrases, ideas and mythological allusions in both the Vedas and the Avesta are so common that for a proper understanding of the one, the knowledge of the other is almost indispensable." The earliest hymns of the Rigveda, the writer points out, "contain some references reminiscent of the Indo-Iranian, and even of the Indo-European period." The same writer contributes another article on "The Early Aryans in Gujarata."

In the same issue Dr. Moti Chandra contributes an article on "Indian Costume from the Earliest Times to the First Century B.C." If the standard of excellence attained in this first number of this Journal is kept up, the "*Bhāratiya Vidya's*" place in the front-rank of Oriental Journals is assured.

NOTICES OF BOOKS.

Anthropology and Sociology.

The Study of Society : *Methods and Problems*
Edited by F. C. Bartlett, M. Ginsberg, E. J. Lindgren, and R. H. Thouless. (Kegan Paul—1939). Pp. xii+498. 10s. 6d.

This volume is bound to prove a great boon to field-workers in social anthropology, both trained students and amateur investigators. The fact that the book is the product of the intimate co-operation of experts in the three sister sciences of psychology, anthropology, and sociology, is a guarantee for the excellence of the work. The book is divided into four Parts and nineteen chapters each of which is written by a specialist. Thus, the first Part, headed "some Problems of Social Psychology" consists of the first five chapters, namely "Some Problems and Topics of Contemporary Social Psychology," by Prof. T. H. Pear, M.A., B.Sc., Professor of Psychology, University of Manchester; "Suggestions for Research in Social Psychology," by Prof. Dr. F. C. Bartlett, M.A., F.R.S., Hon. D. Ph. (University of Athens), Professor of Experimental Psychology, University of Cambridge; "The Relation of Psycho-pathology to Social Psychology" by Dr. J. T. MacCurdy M. D. (Johns Hopkins), Sc. D., Lecturer, of the University of Cambridge; "Modern Trends in Child Psychology" by Dr. M. Collins M. A., B.Ed., Ph.D., Lecturer in Psychology, University of Edinburgh; and "Problems of Terminology in the Social Sciences" by Dr. R. H. Thouless, M.A., Ph. D., Lecturer in Psychology in the University of Cam-

bridge, Department of Education. The Second Part, headed "Social Applications of Psychological Tests and other Methods" contains chapters VI to XI which deal respectively with "Scientific Method and the use of statistics" by Dr. R. H. Thouless M.A., Ph.D., *etc.* of the University of Cambridge, "Intelligence Tests" by Dr. J. M. Blackburn, B.Sc (Econ.), Ph.D. Lecturer in Social Psychology London School of Economics; "The Application of Intelligence Tests in the Anthropological Field" by Dr. J. F. Nadel, Ph.D., Dr. Phil (Government Anthropologist, Anglo-Egyptian Sudan); "Questionnaires, Attitude Tests, and Rating Scales" by Dr. P. E. Vernon of the University of Glasgow; "Some Methods of Assessing Temperament and Personality" by Dr. C. J. C. Earl (Deputy Medical Superintendent, Caterham Hospital, Surrey; "The Work of Vocational Adviser," by A. Rodger, M.A. (Head of the Vocational Guidance Department, National Institute of Industrial Psychology, London). The Third Part, headed "Some Methods of Social Anthropology," consists of three chapters dealing respectively with "The Development of Field Work Methods in Social Anthropology" by Dr. A. I. Richards, Ph.D., Senior Lecturer in Anthropology, University of Witwaterstand; "The Interview Technique in Social Anthropology" by Dr. S. F. Nadel"; and "The Collection and Analysis of Folk-lore" by D. E. J. Lindgren, M.A., Ph.D., Research Fellow of the Newnham College, Cambridge. Part IV, headed "Some Methods of Anthropology" is divided into five chapters — follows:—

"The Methods of Social base Workers" by S. Clement Brown, M.A., Tutor, Mental Health Course, Social Science Department, London School of Economics; "The Value of Team Work and Functional Penetration as Methods of Social Investigation" by Dr. O. A. Oesser, M.Sc, Dr. Phil., Ph.D., Lecturer in Experimental Psychology, University of St. Andrews; "The Study of Social Groups in Industry," by E. Farmer, M.A., Reader in Industrial Psychology, University of Cambridge, Investigator to the Industrial Health Research Board; "Social Surveys" by A. F. Wells, B. Sc.; and "The Problems and Methods of Sociology" by Dr. M. Ginsberg, M. A., D. Litt., Martin White Professor of Sociology, University of London. To each chapter is appended a select list of references. An exhaustive Index completes the volume. In spite of the somewhat un-uniform treatment of their respective topics by the different contributors to the volume, the chapters are all of high merit and usefulness. There can be no question that the volume will be found to be an invaluable guide to the application of sound Methods of psychology, anthropology and sociology to a study of the problems of complex societies and not less so to those of relatively simple societies. We eagerly look forward to the publication by the Editors of this volume of more specialized surveys which they promise in the preface to attempt and issue.

The Native Tribes of America. *A copious Selection of passages for the Study of Social Anthropology*

from the *Manuscript Note-book* of Sir James G. Frazer. Arranged and Edited from the Mss. by Robert Angus Downie, (Percy Lund Hampbries, 1939). Pp. ix + 357. 35s.

This is the fourth and last volume of *Anthologia Anthropologica* containing selections from the select passages from the first-hand accounts of the Native races of the world which had been culled and garnered for years together in the manuscript note-books of that Doyen of Social Anthropology, Sir James G. Frazer, for his own use. The present volume contains extracts relating to the natives of America, arranged geographically, beginning with the Eskimos of Greenland and of the northern extremities the American continent and passing southward through the various native tribes of North, Central, and South America.

The learned Editor has added ■ English translation of part of the long extract from Arriaga's old Spanish book on the extirpation of idol-worship in Peru and besides arranging the contents of the volume geographically has added foot-notes, map, and ■ copious index. Sir James, Lady Frazer, and Mr. Downie and the publishers have laid all students of Social Anthropology under ■ deep debt of gratitude by publishing these very valuable volumes.

Primitive Polynesian Economy. By Raymond Firth (George Routledge, 1939). Pp. xi + 387. 15s.

By his previous works Dr. Firth has given students of Social Anthropology a vivid insight into the life and culture of the natives of Tikopia, "almost the only

remaining island in Polynesia where the ancient ways of life continue practically unaffected by European influence." In the present volume he has endeavoured to apply by anthropological field methods the concepts of modern economic theory to the "institutions of the primitive Tikopian community of agriculturists and fishermen, and the means by which the food problem is met by the Tikopians exhibit no trace of such artificial concepts as "primitive communism," "individual search for food," and the like, by which the economic behaviour of primitive man has been sometimes interpreted. Dr. Firth has, in this volume, sketched the forms of productive organization and the principles of exchange, distribution, and consumption which the Tikopians have evolved to solve their economic problems, and the manner in which these are affected by kinship obligations, by the institutions of chieftainship, by magico-religious beliefs and practices, and by their traditional systems of values. The chronological sequence of their economic activities and the way in which these are fitted in with other important pursuits, are also noted. The problems involving the provision of material goods and questions of human welfare do exist in primitive Tikopia as much as in civilized countries, and they ~~are~~ solved by the Tikopians by an organized and intelligent system of activity. The basic aspects of the Tikopia economy do correspond to the data of ordinary economic analysis, and are covered by the same general propositions. The differences are quantitative rather than qualitative.

"An important feature of the Tikopia system is the personalization of its economic relations, as contrasted with the impersonal

relations of participants in the economic field which is at least theoretically true of our own (civilized) society. Secondly, the operation of the profit-motive is conditioned by other psychological factors concerning the social role of the accumulation and use of wealth. Thirdly, there is a code of reciprocity in economic transactions, but this is but a part of a wider code which obtains for all types of social relationship, which linguistically as well as practically are brought into line with it, and receive much more overt and institutionalized expression than in our type of society" (p. 255).

The book will no doubt form a valuable addition to the anthropologist's Library.

Religion in Primitive Society. By W. D. Wallis. (F. S. Crofts. New York, 1839). Pp. x + 388.

In this volume all the more important aspects of primitive Religion have been analysed and discussed with scientific thoroughness. Religion, as Dr. Wallis says, "includes things, persons, times, places, and events which partake of the holy or sacred. Although the religious ideas of pre-literate cultures constitute the main theme of the book, passing references too are made to the early religious ideas of such ancient cultures as the Egyptian, Jewish, Hindu, Greek and Roman to show that the supernatural is a primary and fundamental element in religion, and emotional response to the extraordinary and the incomprehensible is primary in human nature and engendered and accompanied the animistic interpretations of primitive society. Thus, with reference to such primary elements in Hindu religious ideas, (now surviving in the

popular mind and also more or less in the subconscious mind of the more enlightened), the author writes :—

“For the Hindu, contact with the unknown contains ■ element of incalculable power and may bring unexpected good or unforeseeable evil. Hence all things, animate ■ inanimate, that first come into contact with men are surrounded with an atmosphere of the mysterious and problematic. Their innate powers, *paygan*, occasion apprehension, and measures are taken to ensure ■ far as possible that new contacts bring weal and not woe. Practically always the potentiality of the unknown, especially critical at first ventures, demands protective measures against inherent potential evil consequences. In the unusual there is *S’akti*, or holiness, that is, Supernatural power, which averts the evil eye. Thus butter, milk and gram can be protected by an inverted measure ; a cock with comb reversed is not liable to the evil eye ; dolls hung upside down afford protection to the house and to butter and other comestibles. The evil *S’akti* of the evil eye ■ attributed to many forms of the unusual ; hence reversal of the usual negatives these circumambient dangers...” “The Vedas picture Agni as a god of fire and the Maruts as storm gods who make rocks tremble and devastate the forest. Ushas, the highborn dawn, shines upon men like a young wife, rousing every living being to ■ forth to his work. The Asvins, the Horsemen, first outriders of the dawn, are the first rays of sunrise, lords of lustre. The Solar Orb himself, Surya, the Wind, Vayu ; the Sunshine, or Friendly plant, Soma ; and many other deities, are invoked in the Vedas, in all about thirty three gods, cloven in heaven, eleven ■ earth, and eleven in mid-air. In their totality they are concerned with practically every startling phenomenon.”

Besides ■ analysis of the nature of religion, its psychological aspects, and its cults, practices and injunctions, such topics as the status of women in religious cults and belief in the life after death in prehistoric as well as historic cultures, are also dealt within this instructive volume.

History. ■■■ Archaeology.

A Brief Survey of Human History. Vols. I and II. By Prof. S. R. Sharma, M.A. (Karnatak Publishing House, Bombay, 1938) vol. I. Pp. xi+248; vol. II. Pp. vii+Pp. 249-433. Price Rs 2-4 as. each volume.

This admirable bird's-eye view of the history of human civilisation and culture ■ a whole from its very beginnings down to present times should prove extremely useful helpful and interesting not only to our college undergraduate and High school students but also to the average general reader. The learned author has exercised wise discretion in selecting the more significant and vital scenes in the stupendous panorama of human history ranging from the most primitive period to the most advanced, and laying emphasis where it is justly due. Unlike most previous writers of similar outlines of World-history our author has not ignored or passed over with scant notice the significant contributions of Asia, and particularly India and China, to the world's civilization and culture. Out of the twenty-eight chapters, ■ many as seven namely, Ch. IV (*Indus Civilisation*), Ch. V (*the Heart of Asia*), Ch. XII (*Buddhist Asia*), Ch. XIV (*the Golden Age of Hindu culture*), Ch. XIV (*The Rise of Islam*), Ch. XIX (*The East in Medieval Times*) Ch. XXVI (*Awakening of the East*), deal particularly with the history of Indian and Asiatic culture, besides references to the Orient in ■ few other chapters, such as in Ch. XX (*The Age of Expansion*), Ch. XXIII (*Fall of the Old Order*), Ch. XXV (*The Expansion of Europe*), Ch. XXVII (*The World to-day*).

In reviewing the "*Past, present, and Future*" (Ch. XXVIII) the author very rightly observes :—

"In comparing Europe and Asia, with regarded to their respective contributions to world civilisation, we had emphasised that, although we are accustomed to draw a contrast between them, '*Man, the universally progressive creature, is the one subject of world History.*' There is no East and West here, 'nor border nor breed.' 'Europe may be his workshop and Asia his dormitory for the time being; but time — when the reverse was the —e... The bifurcation of the World into Europe and Asia ■ as untenable as the old assignment of its two hemispheres between Spain and Portugal by Pope Alexander VI. This Kiplengian dichotomy of 'East is East &c -' ought to give place to the truth that

East plus West

Is much the best.

In spite of all its apparent conflicts and divisions this is the New Vision of Man that is striving for realisation in the World to-day. The First Steps in civilisation taken by Africa and Asia led on to the marvellous creative activity of Europe. But now it appears that the Oriental '*Conquest of Civilisation*' has culminated in the Occidental '*Ordeal of Civilisation*,'—to use the phraseology of Breasted and Robinson. However, there could be little doubt that the World to be must be the creation of a united effort of Humanity as a whole; for Integration—not dis-Integration—has been the dominant tendency of Universal History. From Palaeolithic man to our times the World has become increasingly inter-dependent; waves might break and rivers may run dry, but the ocean cannot be split into puddles." (pp. 454-455).

Buried Empires. The Earliest Civilizations of the Middle East. By Patrick Carleton (Edward Arnold, 1939) pp. 290. 10s. 6d.

This well got-up volume which is both history and and archæology combined will form an easy non-tech-

nical introduction, for the student and the general reader, into the *chalcolithic* civilizations of the Middle East—the plains and highlands stretching from the Euphrates to the Indus, although less attention is paid to the Indus Valley civilization than those of Sumerian and other cultures further to the west. The book will further give the reader a fair insight into the methods used by field archaeologists and their mode of reconstructing ancient history by piecing together the finds made as excavation proceeds. The discovery of the chalcolithic civilisation of the Indus valley with its “seven successive levels of occupation” described in the three bulky volumes by Sir John Marshall (*Mohenjo-Daro and the Indus Valley Civilisation*) has been compressed into this volume by judicious selection, into 30 pages which, however, gives the general reader a fair idea of their importance and significance. More exhaustive and detailed account of the story of other early civilizations of the Middle East—pre-Sumerian, and Babylonian—up to the rise of Assyria, or roughly from 3000 to 700 B.C.,—are given in this book in the light of intimate knowledge. Attention is also drawn to the inter-relations between these different cultures. The inferences drawn by the learned author from the various archaeological finds would appear, on the whole, to be sound. In his use of the term ‘Dravidian’ (p. 140) the author appears to have followed an older generation of writers (like Risley) who employed that term indiscriminately to the pre-Dravidian or ‘proto-Australoid’ aboriginal tribes of India who were generally (and are still

mostly) in a very low state of culture, as well as to the racially different pre-Aryan Dravidian people of Southern India who had attained to a high level of contemporaneous material culture to all appearances much higher than that of the Indo-Aryans who probably dislodged them from northern India, and probably belonged to the same racial stock which formed the basis of the dominant population of the Indus Valley in Chalcolithic times. Nor can it be definitely asserted, — our author does (pp. 139-140), that "the hatred felt by the Aryans for the Dāsas was the basis" of that complex institution—the Indian Caste-System, (although it might have formed one of its possible factors). Such minor inaccuracies however, do not in any way detract from the undoubted high merits of the book. Among other inaccuracies may be mentioned the author's mention of the supposed practice of human sacrifice to tree-gods by the pre-Aryan *Kikatas* of ancient Sanskrit literature, and of the iconoclastic proclivities of the ancient Aryans, and the god Shiva having had the goddess of small-pox as His principal wife. In spite such minor inaccuracies, however, this most interesting volume is a very valuable contribution to the study of the ancient history of the Middle East.

Sarkarism : *The Ideas and Ideals of Benoy Sarkar on Man and his Conquests.* By S. K. Ghoshal (Chuckerverty Chatterji & Co., Calcutta, 1939).

In this little book, the author seeks to analyse and set forth the entire philosophy of life in its economic, cultural and social aspects — revealed in the writings of one of India's most prolific and thoughtful and forceful writers, Prof. Benoy Kumar Sarkar of the Calcutta University, whose intellectual and philosophic interests range "from scientific achievements to the folklore of primitive men." By apt quotations and from references to Sarkar's writings the author shows how thoroughly Sarkar is a forceful exponent of creative individualism, of energism and activism. Prof. Ghoshal writes: "The dynamism of ideas of *Shaktiyoga* (energism), *charaveti* (march on), and *digvijaya* (world-conquest) is one of the fundamental postulates of Sarkar's thought." (p. 6). "In the advocacy of this doctrine of energism and activism, Sarkarism, on the one hand, ■■■ a definite counterpart in the *elan vital* of Bergson and *l'impulsion vitale* of Espians, and, on the other, it meets the doctrine of 'perpetual increment' of Benedetto Croce. Sarkar ■ an enemy of Lapouge's doctrine of degeneration and decay. Progress and advancement, and not regression, is according to him the order of this universe. Progress is to him a social reality of human history...He does not fail to see the depressions in the condition of man...Struggles, according to him, may not always lead from victory to victory, they may end in failure sometimes, but this has not set a limit to the efforts of man." (p. 8). "This is Sarkar's doctrine of progress, ■ position which involves automatically the existence of evils, miseries and depressions of life ■ well ■ the eternal struggle of man to overpower them. It implies a spiritual condition of 'creative disequilibrium.'" (p. 10).

"Education ought to make man, ■ indicated in Sarkar's creed, intellectually a 'discoverer of truths' and 'a pioneer of learning,' and morally 'an organiser of institutions and a leader of men ;'" (p. 11) and "Anthropological training is to be regarded as an indispensable item in the irreducible minimum of humanism," and ■ too are comparative psychology, economic history and the history of the exact sciences and technical inventions. (15-16).

"Mankind," says Sarkar, "is in for a philosophical renaissance and a rearrangement of world-forces. In order that India may keep pace with the changed circumstances it is time that she equip herself with the realistic logic of a new humanism and the creative methodology of a self-confident discipline. And with the object of assuring ourselves of this great prophylactic against anæmia in the moral plane, anthropology, comparative psychology, economic history and the history of the exact sciences should be made compulsory at the B.A. stage and rendered as accessible as possible to all the M.A. students." (p. 16).

Sarkar's views on other aspects of human culture—sociological, political, economic, æsthetic, and religious—are equally interesting, instructive and stimulating, and deserve the serious attention and consideration of educated Indians. We invite the attention of the readers to this small book under review and particularly, to Sarkar's valuable voluminous and thought-provoking writings of which a list is appended to Prof. Ghoshal's "Sarkarism."

The Agrarian System in Ancient India.. By U. N. Ghoshal., (University of Calcutta, 1930). Pp. 128.

This book contains four Readership Lectures delivered by the author to the students of the Calcutta University. The topics dealt with are : I. The Beginings of the System and its Development in the Literature of Law and Polity ; II & III & IV. A Historical Account of the System in Northern India (First Period and Second Period and Third Period) V. Ownership of the Soil in Ancient India The Questions of Private or State Ownership.

In the last chapter the author attempts to trace the development of ideas and institutions relating to

property in land in India from the early Vedic period down to the later seventeenth century when Nīlakantha in his *Vyavahāramayukha* discussed the sources of ownership in land. So far as it goes, the book gives a fair account of the lines of land-system in ancient India.

Political Hand-book of the World. *Parliaments, Parties and Press as of January, 1939.* Edited, by Walter H. Mallony. (Harper, New York, 1939).

This is, so far as we know, the first comprehensive periodical survey of the parliaments, parties, and press of the world. The need for such a comprehensive Political Hand-book the necessary factual background for understanding political events has been long keenly felt by all public men and students of politics. And the Council on Foreign Relations, Inc., New York are entitled to the best thanks of publicists and students of Politics and the educated public in general for supplying this long-felt want. The editor has performed his task with great and ability.

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